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THE PREOPERATIVE AND POSTOPERATIVE TREATMENT OF THE TOXIC THYROID PATIENT*

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Recalling, as I do, how little I knew about thyroid maladies when I left Boston and moved to Cleveland in 1924, and how much I learned from my eight years' residence in your Great Lakes goiter region, it seems presumptive of me to agree to the suggestion of your secretary that I discuss the matter of the preoperative and postoperative treatment of the patient with toxic goiter. All of you must have had an immense experience with goiter and, though the serious toxic varieties are not necessarily more frequent in goiter belts, the physiological variations and the opportunity to study this gland in many different conditions is before you daily. After all, the adolescent goiter, a simple physiological overactivity due to iodine-want, often brings with it mild toxic symptoms. In fact, I found, on my arrival in Cleveland in 1924, that a great many young girls were going to surgeons for thyroidectomy instead of taking iodine for their enlarged thyroid glands. That, however, was at a time when the use of iodine in its modern sense was just beginning and now I am sure such occurrences are very rare.

Presumptive as it may seem of me to take up a matter in which your experience must be greater than mine, it is a fact that my interest in this problem has increased with time. This may be due in part to the recent accessions of knowledge in the field of endocrinology which "willy-nilly" has forced all medical men to a more serious and deeper understanding of the functions and dysfunctions of all of the ductless glands. Shortly before I left Boston, Dr.

Sturgis, then a colleague in the Brigham Hospital, and I were greatly interested in the benefits which seemed to accompany the proper use of iodine in the preoperative treatment of the toxic thyroid state. The move to Cleveland presented me with a splendid opportunity to continue our studies and to appreciate more fully the great debt clinicians owe to Plummer for repopularizing the sensible use of iodine in this special field.

My topic deals with the preoperative and postoperative treatment of the patient with toxic thyroid, but reasonable treatment can be based only on a proper understanding of the underlying biological rôle of this gland and of how it is affected by outside conditions. Thus you will see that my remarks are largely concerned with the part played by the thyroid gland in determining the condition of the patient. After all, it is only by recognition of the degree of stimulation in which a patient happens to be before the surgical ordeal that the physician can determine what to do and what will be the consequences of the procedure.

*From the Surgical Clinic of the Peter Bent Brigham Hospital, Boston. Read before the Michigan State Medical Society, Battle Creek, Michigan, September 13, 1934.

†For professional note, see JOURNAL M. S. M. S., December, 1934.

It has always seemed to me that an undue amount of importance has been attached to the particularly sympathetic treatment of these patients without due regard to the organic situation. We all know that in the treatment of any patient, kindness, gentleness, the avoidance of obnoxious stimuli, and happy surroundings do good. These factors, however, do not cure people and in my opinion they are of the same secondary importance in relation to a patient with a toxic thyroid. It is only by as complete an understanding of the pathological situation as possible that we can satisfactorily treat the condition.

The initial cause of the intoxication in the syndrome called Graves' disease or exophthalmic goiter is unknown, but it is certain that as a result of this factor overfunction of the thyroid gland is initiated and may, indeed, steadily increase until a fatality may result. If we do not know the initial instigator of the disorder, we certainly have plenty of evidence that the thyroid gland plays a major part in the continuance of the disastrous sequelæ. We have long learned that it is not the actual size of the thyroid gland that is so important as the fact that the cells are very active and that this activity is represented histologically by great proliferation of the tissue into a microscopic picture which we speak of as hyperplasia of the thyroid gland. This much has been known for a long time. It cannot be said absolutely that toxic symptoms never emanate from the gland in the so-called colloid or resting phase, though this would seem to be true. The reason we cannot say this is because an individual who is the seat of thyroid intoxication and has taken iodine in sufficient amount will have had a hyperplastic gland changed by the administration of iodine to an almost normal appearing gland with plenty of colloid in the acini. The patient in this condition, though his gland appears practically normal under the microscope, may still be in a somewhat toxic condition. The great importance of this whole matter is wrapped up in our knowledge of iodine in relation to thyroid activity. The relation of iodine to the thyroid gland was recognized long ago but since iodine is only of temporary benefit in such cases and since its prolonged or overuse may jeopardize the patient's condition, it fell into disrepute so long ago as the days of Theodore Kocher.

Its present use in relation to toxic conditions of the thyroid gland emanates from careful studies, such as those of Marine, relating to the effect of iodine on the thyroid gland under many conditions, both in man, fish and animals. Immediately following the re-introduction of iodine into clinical use, first as Lugol's solution, it was found that different effects were produced in different types of clinical cases. As a result of this, Plummer and a group of followers suggested that there were indeed two types of thyroid disease—one dysthyroidism in which a poisonous abnormal substance was being manufactured in the thyroid gland, and, second, hyperthyroidism in which the gland was putting out merely an excess of its normal secretion. The adenomatous glands were said to produce merely an excess secretion of the normal substance, *i.e.*, hyperthyroidism, whereas in exophthalmic goiter or Graves' disease there was supposedly an abnormal, incompletely iodized poison and the condition was called dysthyroidism. A great deal of experience has passed by us since these statements were made.

I remember the great hesitation with which Allen Graham of Cleveland and I, in 1926, wrote one of the early papers on the similarity of response to iodine of patients with Graves' disease and toxic adenomata. We pointed out that the only difference between these two toxic thyroid conditions was a quantitative one. This seemed best explained by the fact that the nodular part of the gland was inactive and that the intoxication came from the rim of hyperplastic thyroid tissue about the nodules. This rim of hyperplastic tissue, even in a large nodular goiter, might be smaller in amount than was present in an infinitely smaller gland in which there were no nodules. And it was only this hyperplastic tissue that called for iodine saturation. Moreover, it was clear to us from analogy alone that to presume that dysthyroidism existed was to run counter to all known physiological data. Even today with a much greater experience concerning the endocrine organs behind us we know of no conditions in which a gland secretes anything but its normal product. The secretion may be increased or decreased but it is never changed. We were greatly perturbed at that time because of the tendency of the clinician to rely upon histological studies whereas it had been made clear by

Marine, previously, that the histological picture depended solely on the amount of iodine available to the patient. When iodine is given to patients with hyperplastic glands the microscopic picture changes, involution takes place, the papillary and hyperplastic cells become smaller, colloid fills the acini and the gland assumes a normal histological picture, irrespective of the clinical condition of the patient. Obviously, the amount of iodine to be given is determined by the amount of hyperplastic tissue present plus that unknown but apparently little variable factor of individual iodine absorption. Thus, the pathologist cannot make a clinical diagnosis if iodine therapy has been properly exhibited, though it is true that the amount of lymphoid tissue present and the appearance of the interacinous tissue may give him some hint as to the condition existing prior to iodine therapy. The importance of this lies, however, in the clinicians recognizing that they are the ones to determine the diagnosis and not the pathologist. And this is a good lesson, since in our day there seems to be an increasing tendency for clinicians to rely upon certain ancillary branches of medicine rather than to shoulder full responsibility for diagnosis themselves. All laboratory activities, including the x-ray, have thus been elevated out of proportion to their value and our students show the effect of this attitude in their inability or unwillingness to make any diagnosis without all the laboratory tests at hand. To encourage this attitude further is dangerous, as it tends to rob clinicians of their independence of thought and action which has always brought such valuable gifts to the profession of medicine.

Once the clinical rôle of iodine was understood, the whole matter of goiter, both the toxic and the non-toxic forms, was greatly simplified and no other single factor in relation to the disorders of this gland approaches in importance the matter of whether or not any given patient has been given a sufficient amount of iodine. The matter of importance for us as clinicians to recognize is when to give iodine, how much to give, which stage of iodination the patient is in when first seen, and whether it is to be continued following surgery or not. Much has been written upon this topic, yet the full significance of iodine in thyroid conditions is still worthy of dis-

cussion. It may be said that any thyroid gland which is overactive needs iodine. By overactivity I mean a gland which is secreting in excess of its normal requirements. In such glands there is evidence of its activity by an increase in its blood supply. Such glands, as a rule, present thrill on palpation and a bruit when listened to with a stethoscope. They are usually, but not always, enlarged. The patient who is the seat of such overactivity manifests several definite types of disorder. These may be simply grouped as the circulatory manifestations or the neurological manifestations. The circulatory manifestations of the thyreotoxic patient are simply recognized as tachycardia first and, if this has progressed for a long period of time, the heart may be enlarged and may begin to show signs of failure. A further shift in the circulatory manifestations occurs with long-standing intoxication, whether it be a slow, steady, increased output of the glands over a long period of time, or whether it be from repeated bouts of brisk intoxication. This change is the tendency for such hearts to fibrillate and it has been demonstrated experimentally that thyroxin is more likely to produce fibrillation than adrenalin or other circulatory stimulants. It is this sort of protracted stimulation which results in that now easily recognizable syndrome, the thyreocardiac. The neurological manifestations of the patient with a toxic thyroid are wrapped up in the disturbances to the sympathetic nervous system—the sweating, the exophthalmos, the loss of the vascular control of simple capillary beds resulting in alternate blushing and blanching of the skin, the tendency to easy prostration, to greater motility of the bowels, to tremors of the extremities, and to an unstable psychology—are too well known to need elaboration at this time.

These two essential groups of clinical syndromes are supported, as a rule, by an increase in the basal metabolic rate which is recognized by a simple laboratory test. It may be of some interest at this time to point out that there is an increasing tendency to place less and less reliance upon this simple laboratory test, that is, the basal metabolic rate as determined by the ordinary method. The literature concerning this matter contains numerous articles written by competent observers, which reveal that patients may show many of the symptoms and signs

of thyroid intoxication and yet show little change in their basal metabolic rate. Certainly if we are to attack cases suffering from this disorder early or at safe periods during the course of the disease when there is a normal recession of the activity of the gland, we shall often find but little disturbance in the basal metabolic level. It is increasingly evident that there are probably several forms of thyroid intoxication and that the basal metabolic rate need not always share in the disturbance. The "formes frustes" of the disease are being increasingly recognized and thus greater safety given to our patients, for it is certainly wiser to operate upon such patients at an early period of the disease than when the disease is in the full-blown, intoxicated condition of exophthalmic goiter.

All of us probably see and have learned to recognize different forms of this disease. Your own cardiologist, Dr. Frank Wilson, has published papers telling of his ability to diagnose cases of Graves' disease from the circulatory manifestations long before the basal metabolic rate is elevated. Certainly many of us have seen patients with mild manifestations of circulatory disease long before there is a demonstrable increase in the basal metabolic rate. You may also see patients the seat of severe sympathetic disturbance without either the circulatory manifestations, except for a mild tachycardia, or any elevation of the basal metabolic rate. This is again a lesson in not putting too much reliance on special apparatus and laboratory methods. If we care only for patients with Graves' disease who have elevation of the basal metabolic rate, we should miss treating a great many people who could be relieved of their difficulties.

In a fairly extensive experience with total thyroidectomy, which has meant long periods of observation in every case before the surgical ordeal and months of study after surgery has been accomplished, we have come to place increasingly less reliance upon the basal metabolic rate determination as an accurate indication of what has happened. The symptoms of the patient at the bedside have been checked by other tests which have proven extremely valuable and accurate. The first accessory test upon which we have put reliance has been the determination of the cholesterol level in the circulating blood stream. This, as is well known, diminishes

with overactivity of the thyroid gland and is clearly increased in myxedema. We have repeatedly seen patients, obviously entering myxedema, whose basal metabolic rate was within practically normal limits, but whose cholesterol level revealed the accuracy of one's clinical judgment that the patient was in myxedema. We feel it is essential to enter this distrust of the basal metabolic level, particularly if based on a single observation, because it alone can never give the final verdict in making the diagnosis. The fact that the new drug, dinitrophenol, can elevate the basal metabolic rate without disturbing the circulation is an evidence that these two factors may emanate from separate conditions in the thyroid gland and need not always be taken alone as accurate indication of the total state of thyroid activity.

But having now recognized these patients as suffering from toxic goiter, we must prepare them for the surgical ordeal, for it is certain that, at the present time, reduction in the amount of available thyroid tissue is the surest way to alleviate the condition. It is true that there is a hint in the experimental work already published by Thompson and Collip that a factor has been found in the anterior pituitary body which will actually reduce the basal metabolic rate and even, perhaps, cause atrophy of the thyroid gland, but the application of this work to clinical medicine is not yet here. As a whole, one may group the toxic thyroid patients into those patients who have the classical disease, exophthalmic goiter, and those patients who have lumpy glands and show toxic symptoms, commonly called toxic adenomata. The former group is generally easily recognized; it is generally the more seriously toxic of the two groups. It tends to run in well emphasized bouts of the disease which, if left alone, will show frequent spontaneous remissions and then go back again to a serious condition. When the gland is fairly large and lumpy without much elevation of the basal metabolic rate but associated with only certain of the milder neurological and circulatory manifestations, then the disease is often hidden until the patient suffering for months, or even years from intoxication, goes to a cardiologist with early signs of cardiac decompensation. It matters little what type of intoxication the doctors recognize. It should be clear

now that both are remediable by subtotal thyroidectomy and that before the patient is submitted to his operation he should be carefully prepared by being given iodine. Iodinization can be carried out by many methods. It is the quantity of iodine that is important and whether one gives it in the form of Lugol's solution or potassium iodide makes no difference. The amount given per day is also not of the greatest importance, for, though it is common to give as much as ten to fifteen drops of Lugol's solution three times a day, it has been shown by Thompson that as much as one drop three times a day will cause almost as abrupt a remission and produce also the same histological change. The important thing seems to be the amount of time over which the iodine is given. In several studies which we have carried out, one in 1926 and the other as late as 1934, on typical groups of Graves' disease and toxic adenoma, it appeared to take on the average almost twice as long to iodize satisfactorily patients with Graves' disease as to iodize satisfactorily patients with toxic adenoma. Roughly, it takes from ten to fifteen days for the toxic adenomatous cases and from twenty to twenty-five days for the patient with Graves' disease. By satisfactory iodination I mean the shortest period in which there can be brought about a maximum decrease in symptomatology and a change in the histological picture representing a return of the gland to the normal resting or colloid phase.

Regarding the question as to whether surgery is always necessary, I believe it is necessary if the patient is to receive full benefit from modern treatment. Dunhill, in a most careful study of three hundred consecutive patients with toxic goiter, found that in sixty-two of these patients symptoms had been present over ten years, in one hundred and twenty-five over four years, and in only twenty-four was there a history of less than four years of intoxication. The result of all this, of course, was a serious reduction in the ability of the patient to lead an active life. In the cases in which the intoxication had existed over a long period of time there was considerable damage to the circulation, a great percentage showing auricular fibrillation. It is true that we now know that the damage to the intrinsic nervous apparatus of the heart in cases of thyroid intoxication is not permanent and that when,

even late in the disease, subtotal thyroidectomy is carried out an almost miraculous restoration to a normal life may be had. At the same time, such patients do not afford a happy risk and have in the meantime put in years of anxiety and inactivity. Further, patients in this group often have achieved a most disturbing amount of exophthalmos, a condition which when long-standing often cannot be restored to a comfortable or even safe state.

It would appear from the preceding description that thyroid intoxication and the availability of iodine are the most important matters to appreciate. It is often difficult to find out the state of iodination in which any given patient may be, but this is, however, the critical matter for the doctor to determine. In our experience it has been far safer, if patients have had a course of iodine therapy in which the maximum remission was brought out before seen by the physician, to withhold further iodine therapy and to wait for a new baseline to be restored before starting the therapy which is to precede immediately the operation. Iodinization produces a greater change in the patient toward safety than all of the other things that one can think of doing. It brings the gland back to a normal resting state. The circulation to the gland gradually diminishes, thrill and bruit disappear and the gland becomes firm to palpation. At the maximum state of change the gland is avascular and the surgeon need have no worries at the time of the operation. But, equally important to the ease with which the surgery may be accomplished, the symptoms of the patient decrease, the signs of irritability of the circulatory apparatus may almost disappear, and the signs of sympathetic irritation are wanting. Experience only can give to the surgeon the optimum day for carrying out his procedure. I have already indicated that in cases of toxic adenomata it may be anywhere from the tenth to the fourteenth day, and in cases of diffuse hyperplasia or Graves' disease it may take as long as four weeks of bed-rest and iodination. In a fairly extensive experience, I am perfectly certain of one thing and that is that it is better to carry out the surgical ordeal while the symptoms are disappearing and the basal metabolic rate is falling, irrespective of the height of the symptoms or the laboratory determinations of the basal metabolic rate, than to wait for

a period when the maximum recession has occurred and the disease again begun its upward thrust.

The remainder of my discussion is so simple that it hardly needs elaboration. I believe it is wise to carry out extensive subtotal removal of the gland at a single sitting. If the patient is carefully prepared beforehand and the optimum day for operation chosen, there will be no great anxiety in the operating room and a minimum of worry after the operation. One-tenth of the gland is plenty to leave. It may be said that we have now no criteria for determining in which case regrowth of tissue will be rapid and therefore a return of the toxic symptoms may occur. But all of us who have had recurrent cases probably have become more and more radical in our surgery. The recent large experience we have had with total thyroidectomy for heart disease, revealing the efficacy of thyroid feeding and the fact that it apparently restores all functions of the thyroid gland, and the fact that as small a dose as one-quarter grain of the extract daily is sufficient to prevent myxedema, leads us to be ever more and more radical in an attempt to avoid the recurrent case.

Which anesthetic to use was a matter causing great discussion not long ago. I do not consider it of maximum importance if the patient is properly prepared. For patients with heart disease, for patients with plunging goiters in whom I am afraid of injuring the recurrent laryngeal nerve, and for patients in whom very extensive removal is to be performed, I greatly prefer local anesthesia. In the ordinary case I am in the habit of using, provided there is no renal damage, avertin up to 90 mgm. per Kilo with a little gas-oxygen or ether if it seems wisest. But each surgeon must suit his anesthetic to his own technic. I see no special contraindications, because of the thyroid disease itself, to any particular anesthetic. In the operation there is nothing to be guarded against except removal of the parathyroid bodies or injury to the recurrent nerve. These are simple technical matters and need not delay us at this time.

Regarding the after-care of such patients, again I believe trouble ensues from improper preparation or from removing too little of the gland. In my opinion the thyroid storm is less frequent if there is but little thyroid tissue left in the patient.

Should the thyroid storm occur, I usually administer thyroid substance, not because I thoroughly understand this matter, for it has never been properly elucidated, but because, as a rule, in nature things occur slowly and the surgeon is always getting into trouble by bringing about abrupt changes. I doubt if iodine in the postoperative period is of much use and, in fact, if a very radical removal has been carried out, it only tends to stop regeneration of the gland, whereas one might desire some regeneration to take place. The ordinary surgical postoperative adjuvants should be carried out. Such patients need an unusually high intake of fluid. They are excitable and need more care and seclusion than the ordinary patient. But if the preparation of the patient with iodine has been carefully thought out, if the optimum day for operation has been chosen, I am confident there will be almost no postoperative difficulties.

Thus, we come back again to our original statement that only by a full and proper understanding of what is going on in the patient can we guard against later difficulties. The trials and tribulations of the surgeon begin so often at the operating table that he is apt to concentrate his energies upon that particular occasion, whereas his real source of trouble lies in improper and incomplete study of the situation before he begins his undertaking.

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EVERY PHYSICIAN A HEALTH TEACHER*

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Thirty-five years ago, according to Dr. Holt, there were not even six practitioners devoting their whole attention to Pediatrics. In no medical school was there a separate Pediatric department. There were no infant welfare stations and no public health nurses. Agitation was just beginning for the better production, distribution and supervision of the milk supply. Pasteurization had hardly been thought of. There is no denying that considerable progress has been made. To laboratory workers we are indebted largely for the advantages during the past few years. It is not necessary to dwell long on the details of this progress as you are all familiar with them.

We are more concerned now with the present situation and our ability to make plans for the future. There are research men and full time department heads and educators and they are carrying on most acceptably. There are, among us, clinicians possessing sufficient scientific knowledge to enter the home, the hospital and dispensary and take care of the sick. There are some who possess considerable knowledge of nutrition and can apply it intelligently in solving certain nutritional problems. However, our ideas concerning the subject may change without notice. Most of us are making quite an effort to put into practice our knowledge of preventive medicine especially as it ap-

plies to the prevention of infectious disease. But we feel helpless in the prevention and cure of the so-called upper respiratory infection and its many sequelæ. Its prevalence is nothing less than appalling.

We have recognized the value of the periodic physical examination and have tried, more or less successfully, to do this work, which becomes increasingly difficult as the child grows older. But here is a place where great persistence is justified because in this manner only will we be able to maintain close family contacts, thus placing ourselves in position to know about the cases of poor guidance, mental disturbance, school and behavior problems that exist. These parental contacts should prove of great value also, if we are to assume leadership in all child problems of the community. In the latter we have been woefully slow. Others have taken the initiative in many activities

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in which pediatricists should have been the leaders. The medical profession has not been alert. It has been behind the public. Mothers have found that in matters of mental hygiene their physician or their pediatrician could not help them much. The physician's influence has not been felt in our schools as it should have been. Various nutritional and child management agencies have carried on without the physician's direction. It is the duty of every practitioner to manifest the deepest interest and the heartiest cooperation in all of these activities and agencies, to mingle with, study with, and work with the various individuals devoting their time and attention to child problems. In this way, only, will we learn of their problems and get their viewpoint of the various situations, and finally take over our share of the responsibility. In this connection, would it not be well to have a

look at ourselves. Are we prepared, as we should be, to teach scientific nutrition, child psychology and mental hygiene. Are our medical schools giving these matters the attention they deserve? And, by the way, are they teaching the Practice of Pediatrics as well as the Science of Pediatrics?

So we must go on with our education learning from one another and teaching the public to as great an extent as possible where it is most needed. Medical schools are worthy of our interest and cooperation. Then, after proper preparation, let the medical men enter into these various activities seriously and wholeheartedly. Get over to the lay public and the general profession the best which science has to offer. Build up a greater child consciousness among physicians. Make every physician a health teacher and every physician's office a health center.

EXCESSIVE CIGARETTE SMOKING IN WOMEN AND ITS EFFECT UPON THEIR REPRODUCTIVE EFFICIENCY*

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GRAND RAPIDS, MICHIGAN

Statistical inquiry indicates that over one hundred million cigarettes are consumed yearly in the United States and there is much evidence that women are contributing to these colossal figures in increasing numbers.

The author, after an experience of nearly forty years in obstetrical work, recalls that a quarter of a century ago it was extremely rare to encounter a pregnant woman who smoked even moderately. He has observed, however, a gradual increase in the incidence of smoking among women since that time and is positive that in the last decade the amount has greatly increased. With the likelihood of even greater excess in the future it seems reasonable to draw attention to the possibility that excessive absorption of nicotine, which is undoubtedly the most toxic substance in tobacco, may have a deleterious effect upon female fecundity.

In a fairly thorough review of the literature on this subject we find that very little research work has been done by way of animal experimentation on the effect of nicotine on the female sex organs, and that

the conclusions that have resulted from such work have been somewhat contradictory.

Sukema Ogata, in 1919, observed no apparent changes in the ovaries, either macroscopically or microscopically, after injecting rabbits with a tobacco filtrate which was made by adding one gram of a certain brand of cigar tobacco to fifty c.c. of a physiological salt solution, filtering it after twenty-four hours through a Berkfeld filter.

Dr. Gerd Unbehan, in his article in 1931, considered the effect of nicotine on the white mouse. Three to forty-five minutes after injecting these animals subcutaneously with 1-1000 of a grain of nicotine, heavy cramps and difficult breathing were noted, which lasted from five to ten minutes. This amount was given on alternate days and

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repeated five times. Four mice did not die and their functions remained normal, while two died after four or five injections of nicotine. He stated that the smears during estrus showed that the vaginal changes depend upon ovarian functions, and concluded that in white mice, with hardly any exception, nicotine has an influence upon ovarian function and that the production of the hormone which produces the estrus ceases. Hofstaedter, quoted by Unbehan, in experimenting with white mice during nicotine treatment, found that they frequently ended in abortion and that the offspring were usually weak and died easily. It was also observed that sexual desires were impaired after nicotine poisoning. Unbehan's conclusions were:

1. Nicotine causes cessation of the estrus.
2. It produces degenerative processes in the ripening follicles.
3. It increases follicular atresia.
4. It increases connective tissue.

Nakasawa, of Japan, in 1933, published a valuable article in which he considered the influence of chronic nicotine poisoning on the sexual organs of female rats. After injecting a watery solution of nicotine tartrate into these animals he observed that the sexual cycle was changed, sometimes delayed, and sometimes absent. He observed atrophy of the ovaries, uterus, and vagina. He noticed that microscopically the ovary was poor in corpora lutea, which were mostly old and degenerated. The protoplasm of the lutean cells was scarce and showed vacuoles and fat. The nuclei were indefinite and the connective tissue was increased. He further observed that if the nicotine was continued there was no pregnancy because the menstrual cycle did not occur. He also injected a group of rats during pregnancy, the pregnancies continued, but the offspring were weak and died easily. This author further observed that the milk glands were poorly developed, both microscopically and macroscopically. Nakasawa states that Hofstaedter found that, by injecting dogs, guinea pigs, and rats repeatedly, the sexual function was lessened, the fetuses were weakened and that these injections inhibited follicle development. M. Magolobeli, in discussing the effect of nicotine on the sex organs of women who work in tobacco factories, is of the opinion that it affects the gonads. He states that these

women have fewer pregnancies, more spontaneous abortions, that there are more deaths from 1 to 3 years of age, and that these conditions are due to the direct and indirect effect of nicotine on the sex organs.

In a contribution by Kieffer, he concludes that nicotine affects the digestive organs unfavorably, partly from local irritation, and partly through trophic and motility disturbances of nervous origin, and partly through changes in the digestive juices. He states that women with hyperthyroidism or hypothyroidism are more sensitive to nicotine, and that women who smoke have much lessened secondary sex characteristics. They suffer from disturbances of menstruation, menorrhagia and amenorrhea. He thinks that tobacco causes sleeplessness, migraine, psychic disturbances, and tremor. He states that women in general are more sensitive to nicotine as they have a more mobile vegetative balance. Kieffer quotes Hofstaedter as claiming that women should not smoke during puberty, during menstruation, or during the climacteric, and it should be forbidden immediately after childbirth. Kieffer thinks that mothers should be told of the damage to which infants are subjected when they breathe tobacco-laden air.

In 1927 Hatcher and Crosby demonstrated the presence of nicotine in the milk of nursing mothers who had been smoking twenty-five cigarettes a day. The elimination of nicotine by lactating breasts was confirmed by William B. Thompson, of Los Angeles. Wilhelm, of Dusseldorf, in an article on the "Appearance of Nicotine in Women's Milk after Indulgence in Cigarette Smoking," experimented with ten nursing mothers. The milk was examined one hour before smoking, two or three hours after smoking, four or five hours after smoking, and seven or eight hours after smoking. After cigarette smoking a very small amount of nicotine showed in the milk. The greatest amount was found in nursing mothers who inhaled. Wilhelm, quoting Sokolov, stated that lactation is affected profoundly by smoking. Wilhelm's summary is as follows:

1. The smoking of five or six cigarettes causes no trouble to the child, but unlimited smoking should be forbidden.
2. Over fifteen cigarettes produced a toxic effect on the child.
3. After seven or more cigarettes there is an indication of nicotine found in the

milk and its time of appearance is from four to five hours after smoking.

4. Children may have transient trouble with the stools that can positively be laid to nicotine.

5. Nicotine does not prove to have an unfavorable effect on lactation.

6. Fifteen to twenty cigarettes can affect nursing babies unfavorably.

At the author's suggestion Dr. William German, pathologist, Blodgett Memorial Hospital, Grand Rapids, Michigan, has recently done some experimental administration of nicotine to rabbits and his report is as follows: "One rabbit received over a period of several weeks 15 intravenous injections of an extract made from one cigarette. Following every intravenous inoculation of 1 c.c. of this extract made in physiological saline solution, each inoculation being the equivalent of one-fifteenth of one cigarette, the rabbit repeatedly developed clonic convulsions, becoming tonic in type, from which the rabbits quickly recovered. In all cases, the fifteen inoculations were given over a period of several weeks.

"Autopsy performed on these rabbits showed no gross or microscopical lesions in any of viscera, including the ovaries. Sections of liver tissues showed mild fatty degeneration, but the changes are so mild that it cannot be with certainty ascribed to the effect of the nicotine. No apparent tolerance was developed by the continued use of the drug, since convulsions were produced on every occasion to the same degree.

"General conclusions: Administration of nicotine either by extract of cigarette or by administration of the pure drug by intravenous injection over a short period of time produces no demonstrable changes in any of the viscera. It is possible that this treatment carried on over a period of months might produce demonstrable changes."

Maddock and Collier concluded from their study of the effect of cigarette smoking on young adults that smoking has an unfavorable influence on the progress of thromboangiitis obliterans and they advise against tobacco smoking in patients suffering from that ailment. They demonstrated a consistent increase in the blood pressure and skin temperature of the fingers and toes and they believe that a vasoconstriction of the skin vessels occurs over the entire body.

May this same vasoconstriction not occur

in the vessels of the parenchymatous tissue?

Wright and Moffat, who have verified the work of Maddock and Collier, believe that the carbon monoxide and the products of cigarette paper may be eliminated as offending mediums. Bogen, in an analysis of the "main stream" and the "side stream" of a cigarette smoke, observed that in addition to *nicotine*, carbon monoxide, carbon dioxide, ammonium, aldehyde, and furfural are present. But it seems to be the consensus of opinion that nicotine is the only one of the above products that is toxic and at least no experimental work up to the present time has disproved this.

Bogen states that under ordinary conditions many competent observers have failed to note any deleterious effects whatever from the use of cigarettes. Certain conditions, however, have been so frequently associated with the practice of smoking that the connection seems indisputable. He refers to such conditions as cardiac arrhythmia, shortness of breath, thromboangiitis obliterans, nicotine amblyopia, and chronic inflammations of the upper respiratory passages. His extensive review of the literature has been summarized as follows: "A sound individual may bear what is for him moderate doses without injury, but even these are often noxious to the unsound or to other sound individuals. But the immoderate use of tobacco brings on a series of disturbances which are at first functional, then organic, and of which some are not without gravity."

In order to obtain a cross section of authoritative opinion on the subject under consideration we submitted a questionnaire to over 150 leading obstetricians and gynecologist in the United States and Canada. To date we have received over 100 replies and a critical analysis of the answers and comments has been most interesting even if inconclusive. A report of their clinical observations presents the following percentage statistics:

1. In answer to questions, "In your opinion does moderate smoking of cigarettes rettes in any way impair the Reproductive Efficiency of Women?" the replies were as follows:

Yes 1 per cent.

No 99 per cent.

2. In answer to question, "In your opinion does moderat esmoking of cigarettes

in any way impair the Reproductive Efficiency of Women?" the replies were as follows:

Yes 3 per cent.

No 97 per cent.

3. In answer to question, "In your opinion does excessive smoking of cigarettes in any way impair the Reproductive Efficiency of Women?" the replies were as follows:

Yes 40 per cent.

No 25 per cent.

No opinion 17 per cent.

Do not know 10 per cent.

Doubtful 8 per cent.

4. In answer to question, "What percentage of your obstetrical cases smoke?" the percentages varied from 10 to 100 per cent, with an average of 48 per cent.

A very careful personal inquiry among our private obstetrical cases revealed that 36 per cent of them smoked from a minimum to a maximum number of cigarettes a day. Our figures correspond very closely with those of Thompson, of Los Angeles, who reported that 38 per cent of his patients smoked from an occasional to twenty-five cigarettes daily.

Some of the comments that were made in answer to our questionnaire were of interest and are as follows:

Potter, of Buffalo, states: "Being a non-smoker, myself, I have looked for bad results in patients who use tobacco, both as to milk supply and poorly developed children, but after a long period of observation I failed to find the bad effects I looked for so I am inclined to believe that tobacco is not harmful. My impression is that women do not use it as much as they appear to because they smoke only a part of the cigarette and throw it away before finishing."

Greenhill, of Chicago, believes that excessive smoking occasionally brings on premature labor and believes that excessive smokers do not appear to be as efficient nursing mothers as nonsmokers or moderate smokers.

Quigley, of Rochester, New York, thinks that excessive smoking impairs the reproductive efficiency of the highly neurotic woman.

Norris, of Philadelphia, limits healthy, pregnant women to from five to ten cigarettes a day, and when complications occur he either cuts them off entirely or treats each case individually.

Rongy, of New York, believes that excessive smokers rarely suffer from lack of fertility and that among the most fertile women one observes excessive smoking.

Coventry, of Duluth, says that excessive cigarette smoking decreases sexual desire in women.

Matthews, of Brooklyn, believes that the nervous type and the hyperthyroid cases have their reproductive efficiency impaired by excessive smoking.

Holden, of New York, believes that excessive smoking is harmless unless there is another factor present, such as a low basal metabolism rate.

Taussig, of St. Louis, states that harmful effect of cigarette smoking is highly conjectural, but he is of the impression that the asthenic, with moderate anemia, is probably unfavorably affected by moderate or excessive smoking.

Meeker, of Boston, states that, theoretically, he supposes great excess might cause a toxic depression of oögenesis; practically, however, he believes that such a happening is unlikely and rare.

DeLee, of Chicago, states that he does not know whether or not excessive smoking impairs the reproductive efficiency but that he always prevents it in his practice.

Findlay, of Omaha, is of the opinion that excessive smoking causes nervous disorders that cannot fail to influence adversely the parturient woman.

C. Jeff Miller, of New Orleans, states that when he was doing obstetrical work he found extreme nervousness and occasional miscarriage which he believed was due to the condition of the patient brought on by excessive smoking.

Kosmak, of New York, believes that it is impossible to state frankly as to whether excessive smoking of cigarettes impairs the reproductive efficiency of women. He does not believe that it does but states that it may give rise to other disturbances that must be considered in estimating the character of labor and nursing ability. He believes that excessive cigarette smoking during pregnancy induces certain digestive, respiratory, and nervous disturbances, and has observed that it interferes with the proper administration of the anesthetic.

Caldwell, of New York, states that excessive smoking is usually found among the highly neurotic and nervous individuals. He further states that he has questioned a large

number of women in their sterility clinic and in his office and that whenever there was excessive smoking he found some other cause for their sterility.

Pendleton, of Kansas City, Mo., has observed a few cases of sterility in which pregnancy occurred when the patient quit smoking. He advises against smoking in all sterility cases.

Royston, of St. Louis, states that he has had three women whose sterility disappeared after the cessation of smoking.

Lynch, of the University of California, states that smoking affects women in different ways: that one class does not seem to be upset, even with thirty or forty cigarettes a day; another class gets nervous, "jittery," and coughs a great deal on from fifteen to twenty cigarettes a day. He stops his patients smoking when they are nursing a baby.

Tew, Western University, London, Canada, quotes Professor MacCallum as saying that smoking during pregnancy undoubtedly has a detrimental effect upon the unborn baby by passing through the placenta and into the fetal circulation. Tew advises all expectant mothers to limit their cigarettes to three or four a day.

Frazer, of Montreal, states that he believes that excessive smoking is very bad for pregnant women and especially toward the end when they are preparing for lactation.

Hannah, of New York, is of the opinion that excessive smoking reduces physical health and subjects the patient to infection and poor health, also predisposes to mental disturbance of the mother who believes that nicotine may affect the baby and also inhibit lactation.

Rucker, Richmond, Va., advises patients to stop smoking during pregnancy and insists that they stop when they nurse their babies.

Miller, of the University of Michigan, believes that excessive smoking of cigarettes impairs the reproduction and efficiency of women and would similarly reduce their fertility.

Goodman, of Columbus, does not limit his patients and allows them to smoke in bed, except when nursing the baby. He states that some of his most fertile women are excessive smokers.

Kane, of Washington, D. C., states that

for several years he has attempted to connect the disorders of reproductive functions, and especially lactation, with excessive smoking, and has never been able to prove that smoking is harmful. He tries to limit his patients to not more than six cigarettes a day.

Cornell, of Chicago, feels that a pregnant woman should not do anything that would harm her offspring and that she should be willing to cooperate in every way. He asks his patients to discontinue smoking and drinking alcoholics during pregnancy and the nursing periods. He states that in countries where women have been smoking for many years, such as Turkey and Persia, there are no men or women of outstanding ability as artists, musicians, statesmen, and so forth.

These comments illustrate the lack of unanimity of opinion that exists in the profession concerning this subject.

To conceive, to carry her child to full term, to give birth to it without injury, and to have it develop into a normal and efficient adult, constitutes the highest function and privilege of a woman. Unfortunately this consummation is rarely attained because of both exogenous and endogenous influences which, to some extent, are beyond control at the present stage of our civilization. It would be ideal if more women could have their habits controlled from childhood with the view of anticipating the importance of efficient childbearing and if conditions could obtain whereby no deleterious influence would impair the perfect functioning of her whole organism during the demands of pregnancy, the strain of parturition, the dangers of the puerperium, and during the important period of lactation.

If the author is correct in his belief that the female is adversely influenced by the excessive use of cigarettes, it would be equally logical to assume that the same habit in the male might be attended by a diminution in his fertility.

There is need for further study on this controversial subject and it offers a fertile field for clinical and laboratory investigation.

Conclusions

1. Excessive cigarette smoking is definitely on the increase among American women. The author's survey indicates that approxi-

mately 50 per cent of expectant mothers in the United States and Canada smoke cigarettes.

2. Animal experimentation upon rats and white mice has definitely demonstrated that chronic nicotine poisoning produces pathological changes in their sex organs, adversely influences oögenesis, and results in unhealthy offspring that die early.

3. There is a diversity of opinion among leading obstetricians and gynecologists in North America as to whether or not excessive smoking impairs a woman's reproductive efficiency, but the evidence accumulated strongly indicates that it does and an analysis of the replies to a questionnaire indicates that over 40 per cent are of the opinion that it does have an unfavorable effect upon female fertility.

4. The author believes that there is sufficient evidence at hand to warrant the strong assumption that chronic nicotine poisoning such as results from the smoking and inhaling of from eighteen to twenty-five cigarettes a day is prejudicial to efficient childbearing. He believes that it impairs the integrity of the nervous system, that it interferes with nutrition, that it predisposes to respiratory infection, and that it has an unfavorable effect on the circulatory system. He further believes that excessive cigarette

smoking is frequently associated with other excesses and that it predisposes to a general lowering of the threshold of self-control, which is prerequisite to normal health.

5. The author strongly advises moderation in smoking among females, and especially among young adults who are to become the mothers of our nation. During pregnancy and the puerperium and during the period of lactation smoking should be reduced to a minimum, namely, from one to four or five cigarettes a day.

6. Physicians should sound a note of warning concerning excessive smoking among their female patients and should advise them of the unfavorable possibilities of this habit upon their general health and of the effect that it may have on their reproductive function.

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INTERMITTENT DUODENAL OBSTRUCTION

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For several years there has been considerable controversy as to whether there is such a condition as intermittent duodenal obstruction. As one scans the literature an increasing volume of evidence is presented to prove its existence. But these same articles are far from unanimous with respect to the nomenclature, etiology, physical findings and treatment. It has been variously called duodenal ileus, duodenal stasis and chronic intermittent obstruction. The latter terminology appears to be most accurately descriptive even though some cases are seen shortly after the initial onset of symptoms and hence can hardly be classed as chronic.

Shattuck and Imboden⁵ recently published their findings in an authoritative series of cases of this type but included therein a group wherein the cause was ap-

parently a band of adhesions involving the first and second portions of the duodenum.

In this paper the observations deal only with a duodenal obstruction or stasis in which the causative mechanism is in the third portion of the duodenum or at the duodeno-jejunal junction. This mechanism is not due to any adhesions or other organic disease, as far as can be determined, but is

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the result of abnormal physical characteristics resulting in disturbance of the normal function of this portion of the gastro-intestinal tract.

Over a period of several years I have been greatly interested in a steadily increasing group of cases of this type. These patients have all had quite thorough gastro-intestinal study, but these failed to show any unusual findings except the roentgenological demonstration of delayed evacuation of the duodenum. Similar findings have been noted in association with other gastro-intestinal disorders but such cases are not included here.

Etiology

Duodenal obstruction of this type could, theoretically, be caused in many different ways. The most common conception is that in certain individuals the mesentery and its attendant structures, when crossing the intestine at, or near, the duodeno-jejunal junction exert a pressure sufficient in degree to partially constrict the lumen. However, other factors must be given just consideration.

In 1904 Gates studied a series of 100 cadavers in which he attempted to determine the relationship between the stomach and colon. His conclusion was that there is no definite relationship between these organs. However, there are certain fairly constant relations of portions of the gastro-intestinal tract, such as the duodenum and the duodeno-hepatic ligament, the upper extremity of the root of the mesentery of the small intestine and the point of emergence of the superior mesenteric artery. The latter passes over the ventral surface of the third portion of the duodenum and could very readily exert pressure at this point.

According to Todd, the tone of the gastro-intestinal musculature will vary from day to day. Such a variation in tone would certainly favor the development of this picture and we do, unquestionably, find recurrence of symptoms, at times, following prolonged nervous tension or fatigue when we would expect a decrease in the general tonicity.

Embryologists have shown us that in fetal life the mesenteric vessels come to lie across the duodenum during the rotation of the original gastric tube. Hence, anomalies of position may readily develop. There may be an unusually sharp angulation of the

duodeno-jejunal flexure, particularly in an asthenic type of individual. Raymer Jones,² in 1930, stated that in a number of cases he found this latter phenomenon and noted that it was aggravated by the pull of several loops of small intestine coiled in the pelvis. The ligament of Treitz, it has been stated, may also at times cause compression in this location.

It is also quite possible that in certain cases a neurogenic factor might be the basis of the trouble. In these cases we could assume that there is an absence of normal nerve supply to a portion of the duodenum resulting in inadequate muscular function of this part of the digestive tube. This lack of normal nerve supply has been demonstrated by certain Australian workers when working on the causation of megalocolon. Similar findings may some day be reported in investigation of this subject.

Other observers have suggested that the weight of a full atonic stomach might in itself compress the third portion of the duodenum and prevent its emptying. This does not seem possible however, when we consider the relationship of these organs, particularly when the patient is standing.

Incidence

From the twenty-three cases which have been studied the following facts are of pertinent interest. The condition is definitely more common in women than in men. It occurs most frequently from the twenty-fifth to the thirty-fifth year, but extremes have been reported from three to seventy. In this group there were fifteen women and eight men. The youngest patient was fifteen and the oldest fifty-six. All but two were definitely of the asthenic type and with only one exception there was considerable ptosis of the stomach and colon.

Quite recently it was my privilege to see a case, which was demonstrated by Rowland and Johnston, occurring in a two month old infant. This child was operated because of intestinal obstruction and the above condition was found.

Symptomatology

As before stated, the symptoms are variable and except in extreme cases are intermittent in their appearance and irregular in their duration.

In describing the symptomatology it might be well to again consider the type of

condition present. If we have a severe case we could very reasonably expect to find symptoms similar to those present with any other type of upper intestinal obstruction only perhaps in not such a marked degree. This, I believe, is the case.

On the other hand, in the milder type of case, where symptoms occur at intervals we can compare them with what happens when the duodenum is suddenly distended by artificial means.

Different investigators have tried to work out some scheme whereby an opaque substance might be introduced directly into the duodenum. This was done in an attempt to visualize more accurately the functions of this portion of the digestive tract and avoid the interference of the superimposed gastric shadow. Almost invariably this has proved to be impractical as the sudden filling of the duodenum beyond normal conditions resulted in considerable distress accompanied, usually, by nausea or vomiting. I have frequently noted the same symptoms during transduodenal biliary drainage either at the time of stimulation of bile flow or when flushing out the tract on the completion of drainage. At these times the solution must be introduced slowly to avoid any distress due to sudden duodenal distention.

The average patient will give something like the following story. He will complain of upper abdominal distress usually appearing soon after a meal. This distress is usually described as a feeling of fullness or bloating beyond all proportion to what he has eaten. There is usually belching or a desire to belch but such eructations do not necessarily give any relief. The appetite is not, as a rule, very good during these attacks. However, occasionally the patient will state that he will sit down to a meal with a good appetite only to find that he feels quite full after a few mouthfuls of food. During periods of remission the appetite is fairly normal.

Sour stomach and heartburn are frequently present and in most instances sodium bicarbonate has been used with varying results. In most cases there is a history of nausea and in the more severe types vomiting is present. In these latter cases the emesis usually gives rather prompt relief, so much so, that frequently the patient has learned to throw up with very little effort and practically none of the unpleasantness present after emesis due to other causes.

Vomiting is not projectile in character. The vomitus usually consists of sour, bitter undigested food, frequently with considerable mucus and in some instances bile is present.

Pain, that is real pain, is present in about one-half of the cases. When present it is almost entirely confined to the upper abdomen, chiefly the epigastrium. It may be a constant aching pain but is most frequently described as a crampy pain. It may appear from fifteen minutes to two hours after eating.

Practically all of these patients will state that they experience relief by lying on the abdomen or by assuming knee-chest position. Many of them have formed the habit of lying on the abdomen when sleeping, as they are much more comfortable in that posture. In many instances an abdominal belt is worn as it lessens the distress. One of my female patients has stated most positively that during the past few years the two periods when she felt best were during the latter months of her two pregnancies. After delivery, symptoms almost immediately returned. From this, one cannot help but assume that upward pressure of the enlarged uterus gave support which either lessened the duodeno-jejunal angulation or in some other way facilitated emptying of the duodenum.

The type of food consumed does not seem to make much difference, with the exception that in some instances a very soft or liquid diet may be taken with very little discomfort, but any bulky food will cause considerable distress. There is, apparently, no difference between warm and cold foods unless there is some associated colon dysfunction.

Constipation was present in most of these cases (eighteen) and was usually of constant duration rather than an associated condition only noted during periods of duodenal dysfunction.

Nervousness was complained of in some degree in all of these cases and was described in various ways such as restlessness, emotional instability, inability to work properly, particularly if the work was more mental than physical, and lassitude out of all proportion to the work done.

These latter symptoms are suggestive of toxemia and might be explained by comparing the condition present with that produced by various physiologists experimenting on animals, with closed duodenal loops. Such

animals soon develop a serious, toxic condition. Whipple says this is due to absorption of a primary proteose arising from the intestinal mucosa. More recently Herrin and Meek³ have published the results of their very interesting experiments, in which they demonstrated very conclusively that this toxemia is a result of the abnormal distention of the duodenum. Clinically it is conceivable that a duodenal obstruction, even though only partial and not due to organic disease, might result in similar toxemia of lesser degree of severity.

When confronted with such a condition it is easy to see how many of these patients have been diagnosed and treated for a variety of maladies such as neuroses, anemia, auto-intoxication, constipation and so on with no appreciable relief.

Physical Examination

These patients are mostly of the asthenic type, slender and underweight. The complexion is often sallow and usually some degree of pallor is present. The muscle tone is usually poor and the blood pressure frequently subnormal. The pulse is variable. Abdominal examination will almost always reveal a soft, flabby musculature with evidence of ptosis of the various organs. Frequently the stomach can be outlined and shown to contain food or fluid taken quite some time before. Considerable gurgling after palpation of the partially filled stomach is frequently noted. The deep reflexes appear to be hyperactive in most cases.

X-ray Examination

X-ray examination was first reported by Jordan in 1911. Preliminary examination by fluoroscope should be done four to six hours after ingestion of a barium meal. This will usually reveal a gastric residue of varying proportions. However, this examination does not as a rule reveal the cause of the delayed emptying, as at this time the duodenum is not distended since most of the barium has worked its way beyond the duodeno-jejunal flexure. The stomach should not be manipulated as it may increase peristalsis and give a false idea of gastric motility.

Following these observations more barium is given slowly. The stomach will usually be found to lie quite low in the abdomen,

not infrequently the greater curvature being down to the bottom of the pelvis. Peristalsis is very weak, sometimes being barely demonstrable. At first, a fair amount of barium may leave the stomach immediately and progress rapidly around to the third portion of the duodenum, where it seems to halt. Gradually the lumen of the duodenum will widen and present a feathery appearance. Pretty soon a typical writhing movement sets in as anti-peristalsis is inaugurated and increases in intensity. Some of the barium may return to the stomach. Small amounts of barium may trickle into the jejunum every few seconds.

Manipulation of the stomach, particularly gentle upward pressure, will frequently relieve the obstructive factor and the barium will then move around more rapidly through the duodenum once it leaves the stomach.

Observations should be made with the patient in the vertical, prone and supine positions. This is advised since what we might call positive findings are frequently noted in the vertical position in patients with no symptoms or in patients who have some other type of pathology. But, if the condition persists with the patient lying on the back and even more so if present when lying on the abdomen, I believe especial attention should be focused on this area.

This is said, remembering that these patients, as noted above, will state that they frequently can tolerate a liquid or soft diet when a bulky diet causes distress. Hence it would seem that if a thin barium meal will show the above findings thick barium would certainly demonstrate them more profoundly. In two cases I ventured to give patients a thick almost solid barium mixture but it was so repulsive to them that not enough was taken to make a satisfactory examination.

The x-ray films in these cases will confirm the above findings but from them alone one cannot make a diagnosis. I believe that the most valuable information which one obtains is that derived from the fluoroscopic examination, and then only in conjunction with the history and physical examination. When in doubt, repeated examinations should be made as they may clarify the situation. These are also of considerable help in determining the progress of a patient under treatment. In four such cases where medical treatment was satisfactory a decided change in the fluoroscopic picture was

noted. This change was evidenced by partial or almost total disappearance of the signs of duodenal stasis.

Laboratory Studies

Gastric analysis did not reveal any constant findings. Transduodenal biliary drainage by the Lyon method did, in some instances, show evidence of biliary tract stasis but there were no findings that could be said to be indicative of the condition with which we are dealing. Five patients showed positive skin tests to a vaccine of *B. Coli communis* and two to *Streptococcus fecalis*. Varying degrees of mild anemia are usually present. Stool examinations were negative for blood.

Treatment

In this type of duodenal stasis due to pressure across the terminal portion of the duodenum, I believe that medical treatment is the method of choice at first. Any measure that will tend to build up the patient is justified. If possible the patient is better to be in bed. Exercise can be used to strengthen the abdominal muscles. If up and around a properly fitted abdominal belt is frequently of considerable help.

Meals should consist at first of nourishing food in liquid or soft form. Frequent small meals are preferable to the usual three meals a day. If possible, I have the patient lie on the right side or on the abdomen, or assume knee-chest position for one-half to one hour after a meal. Sedatives are prescribed as indicated and satisfactory bowel elimination must be maintained.

In two instances after other resources failed I have been able to improve nutrition by using insulin as suggested by Barker and other writers. If the patient is in bed Wilkie believes in elevating the foot of the bed. From this one can readily see that no one course of procedure is satisfactory to all and in some instances no satisfactory result occurs.

In this latter group surgery will, in some instances, offer marked relief. The first operation for this type of condition was, I believe, performed by Staveley in 1902. As to the most satisfactory type of operation, providing that it is not simply a problem of

releasing some adhesions, I will leave that to the judgment of the individual surgeon as I have not seen a sufficient number of operated cases to feel qualified to express any dogmatic opinion. However, duodeno-jejunosomy appears to give the best results.

One of the most experienced men in this field is Wilkie of Edinburgh and he prefers to do a duodeno-jejunosomy. Higgins of Cleveland has published results of a large series of cases operated upon by this method and with good results. Shattuck and Imboden have reported that eight of their series of cases were operated, when medical treatment had failed, with considerable relief in all but two cases, from this operation.

Gastropexy and cecopexy and gastro-enterostomy have been tried with rather discouraging results. However, in the case of the infant, mentioned above, posterior gastro-enterostomy was performed with an excellent result up to the present. This operation was performed in January, 1933.

In conclusion I would like to reiterate that apparently there is a large group of individuals who have considerable distress from interference with the normal mechanism of duodenal evacuation due to pressure at or near the duodeno-jejunal flexure. This pressure may be due to a number of benign causes.

Such a diagnosis should only be made after the correlation of a careful history, a thorough physical examination with laboratory study and a complete roentgenological study.

Treatment should first be of a medical nature and if that should fail then surgery must be considered, although, in neither cases can one guarantee absolute relief.

The surgical method of choice is duodeno-jejunosomy.

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CONSERVATIVE REPAIR OF PELVIC PROLAPSE

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Conservative surgery in pelvic prolapse is primarily considered during the child-bearing period. Accurate diagnosis and repair of the tissues involved leads to excellent results. The technic so well described by George Gray Ward was used in each case presented here and, although the series is small, uniform success was achieved in all degrees of prolapse, two of which were of the third degree type.

The extent of injury to the supporting structures of the pelvic organs determines the degree of pelvic prolapse. In current usage, pelvic prolapse infers some degree of uterine prolapse, accompanied, or not, by other pelvic organs. We are using the term in the latter sense in this paper.

Anatomy

The anatomy primarily involved is that of the upper pelvic floor or diaphragm, which consists of the suspensory structures of the uterus, vagina, bladder and urethra. These structures are so intimately associated with one another that some authors describe them as integral parts of a whole. From the surgical aspect they are best described separately. They are: the utero-sacral, the cardinal, the utero-pubic and round ligaments and the vesical fascia. With the exception of the round ligaments, surgical repair is directed individually to each of these structures when they are damaged.

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Secondarily, the "perineum," or lower diaphragm, composed of the levator ani group of muscles and fasciæ, the urogenital diaphragm and the sphincter ani and vaginæ, may be involved. The structures of the upper and lower diaphragms may be involved in any combination and degree of injury. B. J. Anson gives a beautiful description of the anatomy in Curtis's new "Gynecology and Obstetrics."

The relationship of one diaphragm to the other may be compared to the floors of a two-story house with a collapsible stairway running through the middle of each floor. The floors with their concealed supports represent the upper and lower diaphragms while the stairway represents the genital tract. With this homely comparison we can roughly visualize our problems. Damage of the upper plane will cause sagging (prolapse) of the stairway even if there is little or no damage to the lower plane. Severe damage to both floors, which is most frequent in prolapse, allows easy collapse.

Summary of Cases

No.	Age	DEGREE OF INJURY									Duration of Symptoms	Ovarian Cyst Removed	Result	
		Prolapse			Cysto- cele	Recto- cele	Incont. Urine	Uterine Retroversion						
		1st	2nd	3rd				1st	2nd	3rd			Anat.	Clin.
G-1509	28	1			1	1	1		1		8 yr.		Excell.	Excell.
G-2654	40	1			1	1	1			1	7 yr.		Excell.	Excell.
G-3341	41		1		1	1			1		20 yr.		Excell.	Excell.
G-4588	26		1		1	1				1	6 yr.		Excell.	Excell.
G-4936	31	1			1					1	6 yr.		Good	Excell.
G-5330	42		1		1	1				1	12 yr.		Excell.	Excell.
N-11306	36	1			1	1	1		1		?		Excell.	Excell.
607	32			1						1	5 yr.		Excell.	Excell.
721	25		1		1	1				1	8 yr.		Excell.	Excell.
792	29		1		1	1	1			1	8 yr.	1	Excell.	Excell.
795	33			1	1	1	1		1		8 yr.	1	Excell.	Excell.

It is evident why repairs should be made to both planes at the same time.

Method of Repair

The theory of the Ward method of conservative repair of pelvic prolapse is based upon the result of trauma in the above described situation and the repair of the injured structures. Accurate specific diagnosis of the extent of injury must precede the repair. All of the supporting structures of the pelvis, with the possible exception of the round ligaments, are readily accessible through one avenue, the vagina. It has been shown that shortening of the round ligaments is not necessary in the repair of these cases. These considerations are important for they obviate the necessity of a laparotomy with the attendant risk and discomfort.

The chart gives a brief summary of each case with the result. The term "excellent," anatomically and clinically, refers to the replacement of organs to planes within normal limits and cessation of all referable symptoms respectively.

Comment

In our first four cases Ward's technic was carried out entirely as described, but in the fourth case the retroversion was not entirely corrected and the vesico-uterine angle was not as pronounced as it should have been; we believed that the stay sutures of catgut were absorbed before adequate healing took place. Since then a silkworm stay suture has been substituted allowing it to remain two to three weeks before removal, with good results.

The Kelley method of suture was used for all cases of incontinence.

In two cases good sized ovarian cysts were removed vaginally.

All cases were followed for periods varying from three months to three years.

Summary

1. Ward's method of repair eliminates an abdominal operation.
2. Normal anatomical relationship is maintained.

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A DISCUSSION OF THE VALUE OF VARIOUS PROPHYLACTIC MEASURES IN THE PREVENTION OF COMMON COLDS*

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There can be no question of the widespread public interest in the prevention of colds. One has only to examine the advertising columns of our leading periodicals to realize that the manufacture and sale of proprietary remedies designed to prevent colds constitute an industry of sizable proportions. That such an industry can only be supported by a public which is not only "cold conscious" but also eager to adopt any method which promises relief from respiratory infections, is self-evident. It is for these reasons that in this report an attempt will be made to analyze and discuss critically the various ethical measures and remedies which are advocated as being of prophylactic value in the prevention of upper respiratory tract infection. Inasmuch as a discussion of all methods now in use would be too time-consuming, the majority of the measures will be reviewed briefly while the rôle of vitamin and vaccine therapy in the prevention of colds will be discussed at length.

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During the past fifty years numerous remedies have been suggested by the medical profession as specifics in the prevention of upper respiratory tract infection. Shortly after the introduction of cocaine hydrochloride into therapeutic usage we find it lauded as an excellent remedy for aborting colds⁴⁷ and as recently as 1928 we again find a detailed discussion of its value in treating colds.⁴ (One wonders how many individuals have been converted into drug addicts by the use of this method.) Bicarbonate of

soda has had recurring waves of popularity as a prophylactic during the past century. Recently it has been in favor again on the basis that the administration of soda controls an assumed but as yet undemonstrated state of acidosis which is supposed to predispose the individual to colds.

Spraying and douching the nose and throat with bland or antiseptic solutions during periods in which colds are prevalent have always had many advocates. The only difficulty with these measures is that they accomplish little. It has been shown⁹ that it is impossible to free rabbits' upper respiratory passages of pathogenic organisms by treatment with antiseptic solutions. Furthermore, there is definite evidence that the indiscriminate use of nasal douches is a dangerous procedure and is liable to be followed by infections of the paranasal sinuses. Hardening exercises in the open air, during the season of the year in which colds are prevalent have been very popular in the prophylaxis of respiratory tract infection during the past twenty years. However, the evidence which is available does not support the value of such measures. It has been shown²³ that, in a group of three hundred adults who were studied during the winter of 1929-30, upper respiratory tract infection was as prevalent, as severe and of the same type in individuals who exercised four or more hours per week out of doors as it was in individuals whose outdoor exercise amounted to less than four hours per week.

The rôle played by vitamins in the economy of the human body has been under continuous investigation for the past twenty years and in this period certain experimental facts have been adduced which have led investigators to hope that certain of the vitamins might be of value in the prophylaxis of human upper respiratory tract infection.

During the earlier investigations upon the effect of vitamin therapy in resistance to infection, the substance called "fat soluble A" was considered to be a single factor. It was later shown to contain both Vitamin A and Vitamin D. Hence, in evaluating the earlier reports dealing with the effects of "fat soluble A" the dual nature of the substance must be kept in mind.

In 1913, Osborne and Mendel⁴⁴ described a peculiar eye disease occurring in rats whose diet was deficient in "fat soluble A."

This condition was later called xerophthalmia. Within a few years several investigators^{19,36,51} noted that respiratory tract and other infections were common in rats which were suffering from a "fat soluble A" deficiency. Daniels¹⁵ found that rats fed upon a deficient diet for ten weeks always showed a purulent sinusitis and otitis media and that in some of the animals abscesses at the base of the tongue and lung infections were present. At about the same time Mori,⁴¹ working in McCollum's laboratory, described the pathological changes occurring in the respiratory tracts of "fat soluble A" deficient animals. Xerotic changes of the mucous membranes of the larynx and trachea were noted, together with a progressive thickening of the epithelial layers. Eventually the xerotic process involved the tracheal mucosa. At this stage the xerosis often became complicated by inflammatory changes which involved the bronchi and lungs and which sometimes terminated in a broncho pneumonia. This was the first detailed description of the changes occurring in the respiratory tract.

Shortly after Mori's report, Yudkin⁵⁸ and Lambert³³ stated that, as a result of their observations, they believed that the earliest lesions in "fat soluble A" deficiency were focal inflammatory lesions in the cornea and that the cornification of the cornea was essentially a secondary change, thus making a state of lowered resistance followed by infection the important factor in the production of the experimental disease.

However, in 1925, Wolbach and Howe⁵⁵ confirmed and extended the observations of Mori. They found that, while infection of the nares was common, the epithelial changes occurred wholly independently of infection. In the larynx, trachea, or bronchi infection was or was not present, with or without replacement of the normal mucosa by keratinizing epithelium. In the lungs proper, all changes, whether or not accompanied by infection, were considered as secondary to the changes in the bronchi. Their final conclusions were that "the substitution of the keratinizing epithelium in all locations is not secondary to infections, and presumably is a primary effect of the withdrawal of factors essential for the chemical activities or maintenance of the epitheliums concerned." In the course of further investigations⁵⁶ these authors have

likewise shown that in recovery from this vitamin deficiency "the epithelium in each region returns to its normal type."

Recently it has been demonstrated that slight lesions of the mucous membrane can be detected before any gross signs of Vitamin "A" deficiency appear. Thatcher and Sure⁵² have pointed out that changes in the posterior part of the tongue and in the respiratory tract may occur before any other of the epithelial structures are involved. Such an observation, taken in conjunction with those of Wolbach and Howe, seems to point definitely to a primary epithelial change which may or may not be followed by an infection. The susceptibility of the damaged epithelium may be due to several factors:⁴⁶

- "1. The absence or reduction of the mucous membrane secretions which not only wash off bacteria and other particles but also have an active bactericidal action.

- "2. The presence of epithelial debris, particularly in glands whose ducts have been blocked, provides a favorable medium for the growth of bacteria which are already present.

- "3. The possibly increased permeability of the metaplastic mucous membrane.

- "4. Artificially induced infections in such animals suggest that the general as well as the local resistance of these animals may be lower than normal."

In summarizing the relation of experimental "fat soluble A" deficiency to the occurrence of infection, it may be said that there seems to be rather definite evidence that such a deficiency renders the experimental animal susceptible to spontaneous respiratory tract infection as a result of the widespread metaplasia of the epithelium of the respiratory tract. The part played by the lowering of the general resistance of the animal is as yet uncertain.

Despite the fact that large series of cases have been reported from various parts of the world, it is difficult to demonstrate that respiratory tract infection is prevalent in human beings who suffer from a "fat soluble A" vitamin deficiency. During the Great War, Bloch⁵ reported that children suffering from a Vitamin "A" deficiency were very susceptible to respiratory tract infection for some time before they developed clinical xerophthalmia. In a later communication the same author⁶ states that 80 per cent of

Danish infants admitted to hospitals because of xerophthalmia showed severe infections elsewhere. Niemann and Foth⁴³ observed that infants on a restricted diet suffered a higher mortality rate during an influenza outbreak than did those who received a diet rich in Vitamin "A." In England²² an epidemic of pneumonia associated with non-contagious, granular, conjunctivitis cleared up after the eye condition was recognized as early xerophthalmia and a proper dietary régime was instituted. Cody¹³ reported that diets deficient in Vitamin "A" and "D" gave rise to a chronic, non-fetid rhinitis which was benefited by vitamin therapy. He also thought that cod liver oil was of great value in preventing upper respiratory tract infection.

It was early shown by Wilson and Dubois⁵⁴ that in extreme "fat soluble A" deficiency in man, the pathological changes, both in regard to the primary epithelial metaplasia and the secondary inflammatory reactions, were identical with those described in the experimental condition in rats. This observation has been confirmed by Wolbach.⁵⁶ It would seem, therefore, that although "fat soluble A" deficiencies have been widespread at various times, the same degree of secondary changes resulting from infection are not as common in human beings as they are reported to be in experimental animals.

There has been very little reported concerning the use of Vitamin "A" and Vitamin "D" in the prophylaxis of respiratory tract infection. Holmes and his associates³¹ studied the incidence of colds in two groups of industrial workers during a four-month period. The first group consisted of 185 individuals and to each of these a daily tablespoon of cod liver oil was given. The second group of 128 individuals served as controls. Fifty-five per cent of the treated group were free of colds during the test period, while only thirty-three per cent of the controls were not ill with respiratory tract infection. Fifty-two per cent of the vitamin treated group and forty-one per cent of the control group lost no time from work during the test period. Taken at their face value, these results would seem to be very promising but when the size of the groups and the short period of observation are taken into account, it is possible that the results represent the vagaries of chance.

In concluding the discussion upon the use of Vitamin "A" and "D" in the prophylaxis of respiratory tract infection it is evident from experimental data that a grave deficiency of these substances brings about changes in the epithelial surfaces which promote the chances of infection. However, one finds relatively few clinical reports which substantiate the findings in experimental animals. It would seem, though, from these few reports, that a marked Vitamin "A" and Vitamin "D" deficiency in human beings is associated with an increased susceptibility to infections of various sorts. Little, however, is known in regard to the susceptibility to infection of individuals who are suffering from mild grades of Vitamin "A" and "D" deficiency. As far as the prophylaxis of respiratory tract infection is concerned there is little exact knowledge as to the value of these two substances.

When the value of Vitamin "A" alone in the prophylaxis of respiratory tract infection is considered, very little in the way of experimental or clinical evidence can be found. Goldblatt and Benisek²⁵ have reported that the same type of epithelial metaplasia and localized infections can be produced in rats deficient in Vitamin "A" alone as had been previously described in Vitamin "A" and "D" deficient animals. Rats fed on a Vitamin "A" deficient diet lived only one-half as long as the controls and generally died of lung disease, according to the report of Sherman and McLeod.⁴⁸

In human beings Clausen¹¹ believed that the severity of respiratory tract infection can be correlated with a relative deficiency of Vitamin "A" in children. Erben²⁰ on the other hand, while not able to lessen the incidence of respiratory tract infection, thought that the severity of the infections was lessened by the use of a Vitamin "A" concentrate. Wright and his associate⁵⁷ were unable to lessen the incidence of respiratory tract infection by the administration of an abundance of Vitamin "A," and in a carefully observed group of infants Hess and his collaborators²⁷ were unable to reduce the incidence of either winter or summer respiratory tract infections. Recently Clausen¹² has suggested that too much Vitamin "A" may predispose children to respiratory tract infection.

It is clear, therefore, that little clinical evidence has been adduced, up to the present time, in support of the use of Vitamin

"A" alone in the prophylaxis of respiratory infection. This lack of clinical evidence is due to the fact that in general our diet is not deficient in Vitamin "A."

There is very little experimental evidence that a Vitamin "B" deficiency plays any rôle in the production of respiratory tract disease in animals. Cody¹³ reported that rats kept upon a Vitamin "B" deficient diet developed a polycystic condition in the nasal mucosa in the upper posterior ethmoid region. Certain investigators⁴⁰ have reported that an increased Vitamin "B" content in children's diets has reduced the number of respiratory tract infections suffered by these children and Cody¹³ has reported a clinical syndrome characterized by slight but frequent postnasal discharge which can be improved by the addition of brewer's yeast to the individual patient's diet. In general, it can be said that there is little evidence that a Vitamin "B" deficiency plays a rôle in the production of colds.

There is little experimental evidence that a Vitamin "C" deficiency renders experimental animals susceptible to spontaneous respiratory tract infection. Zuzuki⁵⁹ thought that he was able to demonstrate an atrophy of the nasal mucous membranes accompanied by a catarrhal inflammation in guinea pigs suffering from scurvy. Heyman²⁹ reported that he lost a large number of his scorbutic guinea pigs as the result of pneumococcic pneumonia.

In latent scurvy Abels¹ has reported that infections are severe and that in children suffering from this condition coryza and pharyngitis are especially severe. Both Abels¹ and Hess²⁸ have remarked upon the frequency of respiratory tract infection in scorbutic children and Abels quotes Erdheim as the authority for the statement that such diseases were frequently very grave and very persistent in scorbutic children. It is evident that manifest scurvy predisposes an individual to infection, but there is little evidence that an excess of Vitamin "C" over that in the normal diet is of any benefit in the prevention of colds.

The experimental evidence that Vitamin "D" deficient animals are liable to respiratory tract disease is limited to the report of György and his co-workers,²⁶ who reported that in an epidemic of coryza among their experimental rats, 39 per cent of those suffering from rickets died, while all of the controls survived. It has long been believed

that rachitic children are susceptible to acute respiratory tract infection. However, this observation is based upon clinical impressions and has not as yet been put to a statistical test.

There have not been any well controlled observations upon the value of Vitamin "D" in the prevention of upper respiratory tract disease except by means of ultra violet radiation, and in respect to this prophylactic procedure the published reports are at variance. In 1928 Maughm and Smiley³⁸ reported that "a ten minute irradiation of the naked body with the ordinary mercury vapor lamp at a distance of 30 inches once a week throughout the dark period of the year resulted, in four groups of persons (fifty-eight persons), in a reduction in the frequency of colds of from 27.9 to 40.3 per cent." In a second report the same authors³⁹ stated that an irradiated, "cold susceptible" group of college students had an average of 1.56 colds per person in the test period as compared to 2.80 per individual for a control group of 26 students who were not irradiated and who were considered comparable in susceptibility. In another test period with "cold susceptibles" a similar positive result was obtained.

Contrary results were obtained by Barenberg and Lewis³ in a group of infants who received a heavier and more frequent exposure to ultra violet light. The irradiated children had more colds than those in the non-radiated control group. Similar results were obtained by Colebrook¹⁴ in a group of 287 children. Of these, 101 were irradiated by light from an unscreened carbon arc; 94 were exposed to a similar lamp from which radiation of wave lengths shorter than 3,200 A.U. was cut off by a screen of window glass and 92 children received no irradiation. The tests were made during the fall and winter months of 1927 and 1928. The results showed that the screened and control group had slightly fewer colds per child than the irradiated group, while the average duration of the colds was the same in all three groups.

In 1929, in Baltimore, Doull and his associates¹⁷ carried out a most careful investigation of the effects of radiation with ultra violet light. In summarizing their experiments they stated that—

"1. A group of adult volunteers, numbering 363, was kept under observation

from September 29, 1929, to May 31, 1930, a period of 35 weeks, and a vigorous effort was made to secure reports of all cases of upper respiratory tract disease (common colds).

"2. From this number, approximately one-half were selected at random for irradiation, which was given over the first thirty-one weeks of the period. Mercury-vapor lamps were used and the intensity of the erythema-producing rays was measured bi-weekly. The dosage was light to moderate, the individuals being stripped to the waist and exposed, either on the chest or back on each occasion, to that dose which from previous experience with the subject seemed likely to produce only a minimal erythema.

"3. Total incidence (of respiratory infection) for the period was slightly higher for the irradiated (receiving more than 10 treatments) than for the controls. Also cases of a more severe type, as evidenced by absence from duty and confinement to bed, by occurrence of fever, by productive cough or by long duration were just as frequent in the irradiated as in the control group."

It is apparent from the results of the careful experiments of Colebrook and of Doull and his collaborators that irradiation of human beings with ultra violet light does not lessen the incidence or severity of colds.

Bacterial vaccines have been used in the prophylaxis of colds for over twenty-five years. Their introduction for this purpose followed shortly after Wright's successful demonstration of the value of typhoid vaccine in the prevention of typhoid fever. Although little was known twenty-five years ago concerning the causal factors in upper respiratory tract infection, it was generally assumed that certain of the bacteria appearing in the nasal secretions in colds were responsible for the infection. As early as 1902 Pfeiffer⁴⁵ considered the micrococcus catarrhalis as an important agent in the production of colds. Since that time *Bacillus septus* (a diphtheroid), pneumococci, streptococci, *Bacillus rhinitis*, influenza bacilli, and staphylococci have been thought by various investigators to be the causal agents of colds. These assumptions were generally based upon studies of the pharyngeal and nasal flora in small groups of individuals without adequate previous investigations of

the basal bacterial flora of the nose and throat in such individuals or without proper control studies upon normal human beings.

It was a natural corollary that, with the demonstration of a particular organism, or group of organisms, in a given series of colds, a bacterial vaccine should be prepared against the apparent offending organism in hopes of preventing future attacks.

The first reports upon the use of such vaccines were very encouraging and there seemed to be ample evidence that not only was the incidence of upper respiratory tract infection decreased but also that the duration and severity of such attacks were decreased. One of the earliest advocates of vaccine therapy reported² that the use of a vaccine composed of *B. septus*, *M. catarrhalis*, *M. para tetragenus*, pneumococci, *B. influenzae* and *B. Friedländer*:

1. Aborted acute attacks or greatly shortened their duration.
2. Decreased the risk of complications.
3. Relieved chronic sufferers.
4. Conferred a certain amount of immunity.

Two courses of vaccine a year were recommended for those who desired the prevention of colds.

A similar enthusiasm for this new type of therapy was evidenced by Campbell,¹⁰ who reported that by the use of autogenous vaccines "not only are we able to cut short an acute cold, but also to confer considerable immunity against future attacks. By this method we can, further, often successfully treat colds which have become chronic, *e.g.*, chronic rhinitis, laryngitis, bronchitis, etc."

During the pandemic of influenza in 1918-19, numerous observers tested the efficacy of mixed bacterial vaccines in the prevention of respiratory tract infection with varying degrees of success. The *British Medical Journal*⁷ stated that: "The percentage of successes and the length of immunity after vaccination are very variable with any stock vaccine, and autogenous vaccines are the best, but many failures occur." This perhaps was the first widespread warning that bacterial vaccines might be of dubious value in the prevention of respiratory tract infection.

In 1919 Mackey³⁷ sounded a note of caution in respect to the indiscriminate use of vaccines in the prophylaxis and treatment of upper respiratory tract infections. His

experience had led him to believe that the proper use of autogenous vaccines would greatly relieve about one-half the sufferers from recurrent nasal catarrh and modify the infection in about one-third of the remainder. He also remarked upon the favorable effects of vaccine therapy in improving the general nutrition of the treated individuals.

The first carefully planned observations upon the effects of vaccine therapy in the prevention of respiratory tract infection were those of Von Sholly and Park⁵⁰ in 1921. These investigators gave prophylactic inoculations against colds to 1,536 employees of the home office of the Metropolitan Life Insurance Company of New York. A control group of 3,025 uninoculated employees was formed and both groups were carefully observed over a six months' period. Of the inoculated group, 13.7 per cent, as against 29.7 per cent of the control group escaped respiratory infection during the period of observation. The incidence of influenza was the same in both groups. Three cases of pneumonia developed in the inoculated subjects as against twelve in the control group. In analyzing their results, these observers stated that: "We may draw contrary conclusions depending upon whichever part of the report we lay more stress. . . . On the whole, balancing both sides, our evidence does not make a strong case in favor of vaccines given by us as a prophylactic agent against acute respiratory tract diseases—pneumonia alone excepted."

During the same year (1921) Jordan and Sharp³² reported upon their experiences in attempting to prevent respiratory tract infection in a group of over two thousand individuals who had been inoculated with the same mixed bacterial vaccine as had been used by Von Sholly and Park. Their observations were made during a period from November, 1919, until June, 1920. In this space of time 118 cases (4.1 per cent) of influenza developed in 2,873 persons as against 152 (4.8 per cent) cases of influenza in 3,193 unvaccinated individuals. A special group of 347 University of Chicago students were carefully observed in respect to "colds" during the period of study. In this student group 164 were vaccinated while 183 served as controls. In the vaccinated group there were 248 cases of rhinitis, twenty-six cases of bronchitis and forty-four cases of combined rhinitis and bronchitis as against

216 cases of rhinitis, twenty-five cases of bronchitis and twenty-eight cases of rhinitis and bronchitis combined in the control group. Essentially there was no difference in the number of upper respiratory tract infections in the two groups. However, when the vaccinated group was interviewed at the end of the test period all but two thought that they had been benefited by the vaccine and as the authors remark: "‘Satisfied patient conclusions’ differ widely from those of controlled statistics."

Similar results to those just discussed were obtained by Ferguson, Davey and Topley²¹ in a group of English University students. A mixed vaccine containing 8 different organisms was used to immunize a group of 138 students while 148 students served as a control group. At the conclusion of the period of observation it was found that the mean number of colds per person was 1.47 in the vaccinated group and 1.14 in the control group. The only possible conclusion from such results was that prophylactic vaccination with the stock vaccine used was useless. Other investigators⁴² during recent years have reported results corresponding to those just reported.

However, we find many reports during the decade of 1920 to 1930 in which "cold vaccines" were considered to be of value. Many of these deal with "satisfied patient conclusions" or the results are based upon too limited observations. There were, however, certain observations, such as those of Lempriere,³⁴ in which the plan of procedure was adequate and the results of statistical significance. In his third report Lempriere stated that colds occurred in 30 per cent of his inoculated group as against 32 per cent in the control group. Influenza attacked 37 per cent of the inoculated persons and 52 per cent of the non-vaccinated individuals. The average days lost were about the same in both groups and the complication was 18 per cent in the vaccinated group as opposed to 30 per cent in the control group.

Finally, in 1933, Dochez, Mills and Kneeland¹⁶ stated that in a group of vaccinated infants immunization with a simple mixture of the killed prevailing respiratory tract pathogens did not reduce "the number of simple colds or of respiratory infections associated with fever in the vaccinated as compared with the non-vaccinated groups. There was, however, an apparent reduction

in the severity of infections in the vaccinated group as judged by the average duration of the febrile period." This was shorter by 40 per cent, in the vaccinated as compared with the unvaccinated group. These observers in summing up their evidence seemed to believe: "That the technic of carrying out such immunization is time-consuming and burdensome and, in view of the relatively slight protection obtained, does not seem promising for general use."

It seems quite obvious from a survey of the results obtained when bacterial vaccines are used in the prophylaxis of upper respiratory tract infection that the incidence of colds is not decreased, nor is the severity and duration of such infections appreciably diminished. There is, however, some evidence that the complications attendant upon respiratory tract infections are lessened by the prophylactic use of these vaccines. It is not difficult to understand the failure of bacterial vaccines to modify the incidence of colds in view of the mass of acceptable evidence regarding the etiological significance of a filtrable virus as the primary causal agent in epidemic colds. Bacterial vaccines would not be expected to modify the course of a primary virus infection.

It is more difficult to explain the failure of vaccines to diminish the severity or duration of colds. If the prevailing theory is correct that the potentially pathogenic micro-organisms normally resident in the upper respiratory tract become activated by the primary virus infection, and thus contribute their share of untoward effects to the general picture of upper respiratory tract infection, then vaccines might be expected to produce some definite results.

However, evidence of the benefit derived from vaccination against the supposed harmful concomitant effects of the potentially pathogenic bacteria is found to be lacking. There are several explanations for this failure. In the first place, Van Volkenburgh and Frost⁵³ and Doull and his associates¹⁸ have shown in the course of careful clinical studies, covering two thousand cases of upper respiratory tract infection, that the signs and symptoms of a cold are generally most severe during the first four days of the disease. It was also demonstrated in these studies that over 90 per cent of the cases were not attended by any type of complications. A further analysis of these cases has shown that in a group of 214 cases of

upper respiratory tract infection which were studied for the presence of the influenza bacillus, the presence of fever, weakness, nasal discharge, sore throat and cough was noted as frequently or more frequently in those cases in which influenza bacilli were not found as they were in those in which the organisms were isolated. It has also been noted⁴⁹ that the nasal secretions contain few bacteria during the earlier stages of the cold. Thus there is evidence from the clinical and bacteriological studies in uncomplicated colds to demonstrate that the more severe constitutional disturbances may occur before the nasal passages are heavily infested with bacteria and that, insofar as the influenza bacillus is concerned, a more severe type of reaction may occur in individuals who do not harbor this organism than in those who are infested with it.

It is a generally accepted belief that the true pathogenicity of many micro-organisms is primarily determined by their ability to invade the body tissues and thereby set up a reaction. Therefore, if the streptococci, pneumococci, influenza bacilli and other micro-organisms which are frequently found in normal throats, are activated to pathogenicity by the primary virus infection in colds, evidence of tissue invasion should be forthcoming. In the sole modern investigation of the histopathology of the nasal mucosa in upper respiratory tract infection, Hilding³⁰ has demonstrated by studies upon repeated biopsies taken from the nasal mucosa at various stages in colds that the so-called potentially pathogenic micro-organisms do not invade the tissues, but are always found floating free in the nasal secretions.

It is, therefore, possible on the basis of the clinical, bacteriological and histopathological findings that little real evidence exists for the assumption that the secondarily invading micro-organisms play an important role in uncomplicated colds. Because of the paucity of information upon this point we have endeavored, during the past three years, to determine if possible the true part played by bacteria in the course of colds.

Our primary studies were designed to determine the type and significance of the cellular content of the nasal secretions in colds. We have demonstrated³⁵ in a large series of observations that two main types of cellular response are found in the nasal

secretions from patients with colds. The first type is characterized by an early predominance of phagocytic and epithelial cells in the secretions while in the second type polymorphonuclear neutrophilic leukocytes predominate from the beginning of the infection.

An attempt was next made to correlate the cellular response with the bacterial content of the nasal secretions. During the past year we have examined 120 specimens of nasal secretions from twenty cases of colds. In fifteen of these cases, the secretions were obtained upon the first day of the infection. Seven of the first day specimens showed a predominance of polymorphonuclear neutrophilic leukocytes and of these seven samples four were practically free from bacteria when cultured upon blood agar plates, while three contained thousands of micro-organisms. Of the eight first day samples of nasal secretions in which monocytes and epithelial cells predominated, five showed an abundance of organisms and three were practically sterile. It is evident from these findings that on the first day of colds it is not possible to correlate the presence or absence of bacteria with a polymorphonuclear neutrophilic leukocyte response. Inasmuch as streptococci, staphylococci, and pneumococci were the organisms generally found in these secretions this lack of correlation assumes added importance.

Late in the course of these colds (*i.e.*, after the fourth day) the polymorphonuclear neutrophilic leukocytes averaged 90 per cent of the total cells present in the nasal secretions. Nevertheless a very scanty bacterial growth was obtained from eighteen out of sixty-five specimens examined in the late stages of these colds. Here again is a demonstration that the puriform character of the nasal secretions in the advanced stages of colds is not dependent upon the presence of numbers of bacteria.

As it was impossible to obtain normal nasal secretions in quantities adequate for examination, control studies were made upon the secretions derived from eighteen individuals who were suffering from uncomplicated ragweed hay fever. Twelve of the eighteen samples of nasal secretions were heavily infested with bacteria. In seven of the twelve specimens eosinophiles predominated, and in the other five the polymorphonuclear neutrophilic leukocytes were barely in the majority, thus giving further

evidence that a heavy bacterial infestation is not necessarily accompanied by a puriform response. It is interesting to note that all of these patients gave a history of rapid relief upon entering an air-conditioned theater and Gay²⁴ has found that individuals suffering from uncomplicated pollen hay fever are relieved of their signs and symptoms in from ten to thirty minutes after entering an air-conditioned atmosphere. Certainly in this instance the heavy bacterial infestation found in the nasal secretions cannot play any rôle in the production of the signs or symptoms of the disease.

Inasmuch as the invasion of the tissues by bacteria, such as staphylococci, streptococci, and pneumococci, is accompanied by a purulent response, the lack of correlation between the bacterial content and cellular response of the nasal secretions is considered to be evidence of a lack of pathogeny upon the part of these bacteria in the course of colds. Therefore it may be assumed that these organisms are present in the nasal secretions because these secretions constitute a medium favorable for bacterial growth. If this be true, then the failure of bacterial vaccines to modify the severity or duration of uncomplicated colds can be easily understood.

We have presented these preliminary observations with the full knowledge that many more studies of the nasal secretions must be conducted before we can arrive at a definite interpretation of the observed facts. However, we believe that our observations are in agreement with the demonstrated facts concerning the clinical value of bacterial vaccines in the prophylaxis of uncomplicated common colds.

Conclusion

It seems possible to summarize briefly the known facts in regard to the value of prophylactic measures in the prevention of colds by saying that none of the present therapeutic measures is satisfactory. There is little evidence that intensive vitamin therapy is of benefit except in those individuals who show recognizable evidence of a vitamin deprivation. Bacterial vaccines do not seem to influence the incidence of colds, are of little value in decreasing the duration or severity of colds, and are uncertain in their prevention of complications attendant upon upper respiratory tract infection.

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CASE REPORT OF A SOLID TERATOMA OF THE OVARY*

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In studying ovarian teratomata one is struck with the confusion in classification, the various ideas concerning their origin, and the uncertainty of malignancy in the solid form. There are no pathognomonic symptoms which aid in the diagnosis of solid teratomata. They occur more frequently in the young. The solid type cannot be differentiated pre-operatively from other solid tumors of the ovary. Like all solid tumors of the ovary their pedicles may become twisted. They are usually unilateral.

All solid teratomata should be considered intrinsically malignant and removed intact. No ovarian tumor should be punctured, for fear of infection and metastasis. Other organs, especially the opposite ovary, should be carefully inspected. In the young, and if the tumor is intact and there are no signs of metastasis, or attachment of the growth to other organs, the consensus of opinion by many leading gynecologists is that conservative surgery should be considered, but if the tumor is thought to be malignant a complete removal should be done.

Case Report

Miss B., colored school girl, age fourteen years, was admitted to the out-patient department of the Gynecological Service, Woman's Hospital, April 4, 1934. Her chief complaint was an enlargement of the abdomen. The patient noticed a gradual increase in the size of the abdomen in the last two years. She stated the enlargement started at the beginning of menstruation and at the end of two years extended from the pelvis to the costal margin. This growth has not been accompanied by pain or other symptoms. Patient states her general health has been good.

There was evidence of a firm irregular tumor mass filling the abdomen and extending up to the costal margin. Tumor mass could be felt in both lumbar regions, slightly larger in right quadrant. Menstruation began at the age of twelve years, twenty-eight-day type. Duration four days. No dysmenorrhea. No leukorrheal discharge. Last period March 10, 1934.

Urological examination negative. Wassermann negative. Blood count negative. Heart and chest normal. Blood pressure normal.

Operated upon May 10, 1934. A large ten and one-quarter pound tumor of the left ovary, which completely filled the abdomen extending from the pelvis to the diaphragm, was removed with the left tube. The tumor was considered malignant macroscopically, and a hysterectomy and a right salpingo-oophorectomy were done. The patient made a good recovery and was discharged on May 21, 1934. The patient is well at present.

Pathologic Report.‡—Specimen consists of a large tumor replacing entirely the left ovary. Spheroidal in shape and its diameter is 24.5 cm. It

weighs 10.25 pounds. The major part of its external surface is smooth and glistening. In a few areas there are nodular projections ranging in size from a hempseed to that of a pigeon's egg; these consist of dilated blood vessels pushing before them the dense connective tissue envelope of this tumor. The external surface of this tumor is reddish-white in color. It is crossed by numerous extremely congested and dilated blood vessels, showing complicated branching and arborization. The upper part of this tumor contains firm fibrous tissue in excess. This area was attached to the omentum. The large blood vessels passing here were the size of a lead pencil, while they were in a pulsating stage during operation. The consistency of this tumor was that of a resistant rubber ball; it is somewhat firmer than normal liver and slightly softer than the consistency of tendon. On gross inspection of the surface of this tumor a large number of well circumscribed formations were observed. Here the distinctly yellowish color predominates. The noduli are separated by a moderate amount of semisoft loose connective and mucoid tissue. Numerous scattered hemorrhagic areas ranging in size from a hempseed to that of a pigeon's egg were observed. There is a moderate amount of necrotic changes especially noted in rapidly growing parts of the tumor. The left uterine tube measures 16.5x0.7 cm. It is extremely stretched and slightly twisted by its long axis. It does not show any pathological changes.

Diagnosis: Malignant teratoma (sarcomatous type) of the left ovary.

Conclusions

A uniform classification should be adopted. A satisfactory classification is cystic and solid teratomata. Solid teratomata of the ovary according to Geist, Kelly-Noble, Eden and Frank, are very rare; Graves states that only about fifty cases of the solid variety have been reported; Frank has collected forty-eight positive cases and fifteen doubtful ones, and Frankel, in 1920, collected only sixty cases from all the literature. The prognosis is grave. Conservatism should be observed in the young when the covering membrane is intact, and there is no evidence of malignancy. In older women if there is a suspicion of malignancy, a radical operation should be performed.

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‡I am indebted to M. A. Oginsky, M.D., Pathologist, for the pathologic report of this case.

FETAL HYPOGLYCEMIA DUE TO HYPERINSULINISM*

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DETROIT, MICHIGAN

The diabetic mother is frequently delivered of a dead fetus; or, if alive, it dies soon after birth. This fact has been noted by a great number of physicians and several reports substantiating this fact have appeared in the literature. It has also been noted that the full term fetus of the diabetic mother is usually large. Many theories have been advanced as to the cause of these phenomena.

Three cases with autopsy findings are reported. These three cases present certain findings which may offer a logical explanation for these phenomena.

Case Reports

Case 1.—H. M., a white woman, thirty-nine years of age, was first seen August 23, 1928, in diabetic coma. History, obtained from her sister, was that the patient was eight months pregnant and had noted a cessation of fetal movements for twenty-four hours preceding the onset of the coma, which occurred in the early morning of the same day. The patient was very restless and jerky for the twenty-four hours preceding the coma. The onset of the diabetes was in 1920.

Past History.—Influenza in 1918. Severe headache at times. Nocturia once a night two years ago. Frequency, polydipsia, and polyuria before delivery of first child. Loss of sixty pounds in the past five years; weight five years ago 240 pounds.

Catamenia.—Onset of menses at fourteen years of age. Irregular at onset. Duration five days. During the past five years the menses were irregular, sometimes every three to four months. There has been leukorrhea between periods.

Family History.—Mother died at sixty years of age of diabetes. Father dead of unknown cause.

Marital History.—Married twice. First husband died. Patient had five pregnancies by her first husband. Four children living and well; the other was born dead nine years ago. There were four pregnancies by her second husband. The first three were stillbirths. The patient is now in the eighth month of her ninth pregnancy.

Physical Examination.—Patient lying in bed in coma. Acetone odor to breath. Face is flushed. Mouth and tongue are dry. Fetal heart beats are not heard. The systolic blood pressure was 45 to 60; the diastolic was 30.

Laboratory Data.—A catheterized specimen of urine showed acetone, diacetic acid, sugar, albumin, and casts.

Progress.—Forty units of insulin was given with 1000 c.c. of interstitial saline. Insulin was repeated with 20 units at 8 a. m., 20 units at 9 a. m. with intravenous glucose, 20 units at 10 and also at 11 a. m. Caffeine sodium benzoate was also administered, but patient expired at 11:58 a. m.

Post Mortem Examination.—The body is that of a well nourished woman, thirty-five to forty years of age. It shows none of the effects of a prolonged illness. The abdomen is occupied by a symmetrical rounded mass which extends from symphysis to xiphoid, the appearance of an eight months pregnancy. Examination is restricted to the chest and abdomen. The pleural sacs contain no fluid, there are no pleural adhesions. The lungs are pink,

aerated throughout. The covering of the heart is free, no adhesions. The heart has halted in systole and all four chambers are empty. The muscle of the ventricle is thick because of this rigor. The valve flaps of all four chambers are delicate. The coronaries are normal. Abdomen: liver, spleen and gastro-intestinal tract are normal. The abdominal

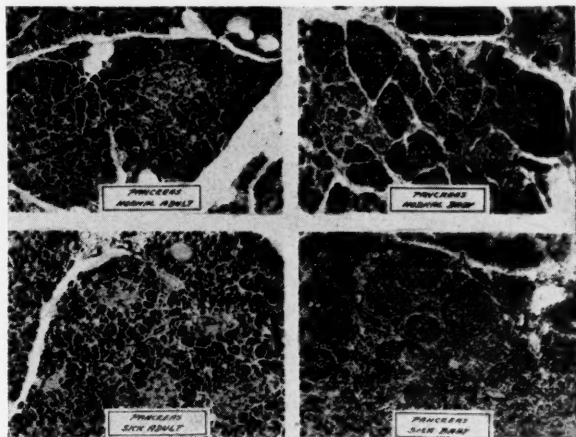


Fig. 1. Sections of the pancreas of a normal adult and the adult in Case 1 who died from absolute diabetes. Also the section of a normal baby's pancreas and the section of a pancreas of the fetus in utero of this mother (Case 1).

cavity contains a gravid uterus which presses up to under surface of the liver and the diaphragm. The wall of the uterus is of a pink-purple hue. It is $\frac{3}{8}$ -inch to $\frac{1}{2}$ -inch in thickness. The membranes are intact. Opening into the amniotic sac releases a normal amount of fluid. The uterus contains an eight month fetus lying in the L.O.A. position, the head apparently engaged. These are the findings in a normal eight month pregnancy. The ureters on both sides are dilated to the size of a middle finger. They are distended with a column of urine. About two inches from the vesicle orifice on each side there is a point at which the ureters become normal in diameter and remain thus for their distal two inches. The pelves of both kidneys are dilated 2-3 times normal size, and the mucosa of the both pelves (particularly the left) is striped by crimson flames of inflammation. The major calyces likewise are dilated, but do not participate in this inflammatory process. The cortex of the kidney is not thinner than normal, nor are the papillae blunted. The capsule strips easily. The pancreas is normal in size, not involved in an inflammatory process. The cut section is normal, no increase in fibrous tissue. **Examination of the fetus:** The fetus is

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large for an eight month pregnancy. The skin is macerated. The fetus has been dead some time. The heart is normal. Foramen ovale and ductus arteriosus are patent, although the openings are small. Abdomen: the viscera are mushy and macerated, they cannot be dissected, sections could not

mellitus in 1924. She coöperated very poorly with her diet and insulin and was treated at the hospital one year later and one and one-half years later and three times in the next three years. Her complaints this admission (February 13, 1934) were uncontrolled diabetes and an eight months pregnancy.

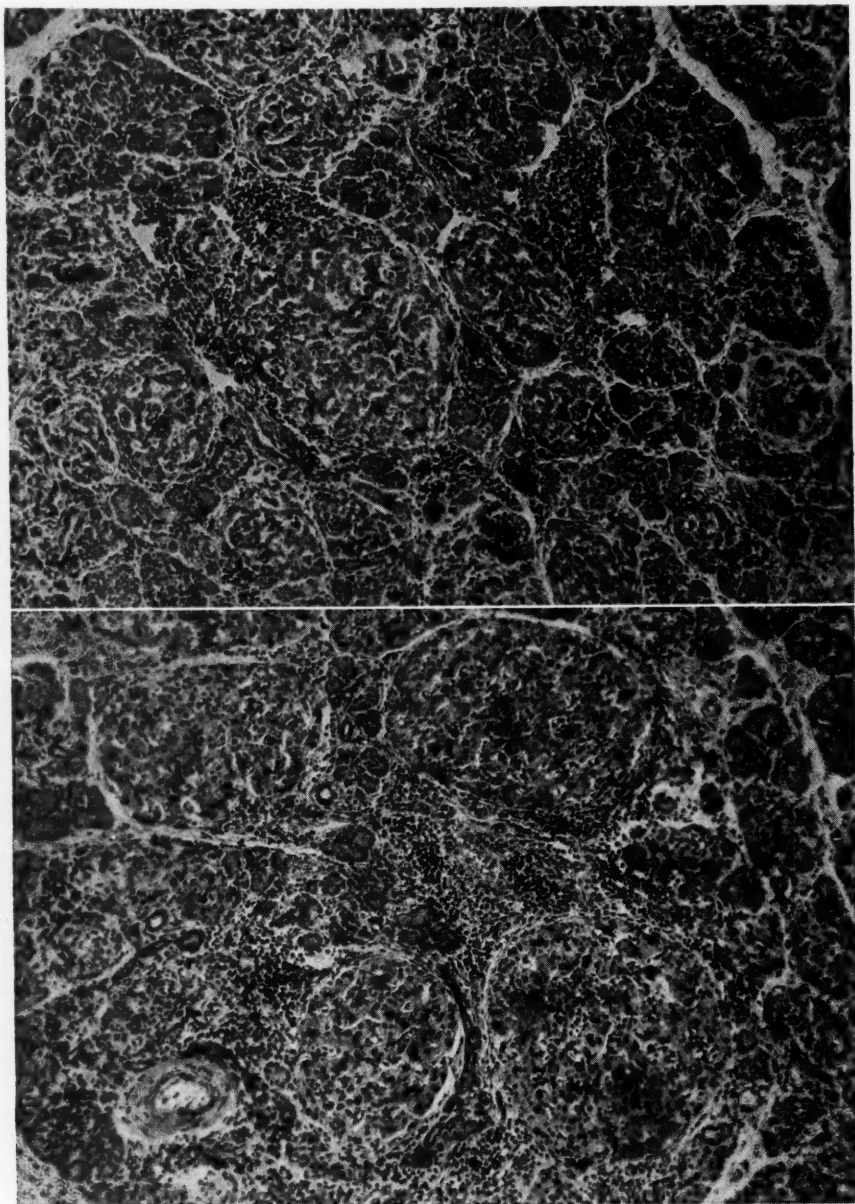


Fig. 2. Pancreas of Case 2 (above) and Case 3 (below) showing the hyperplasia of the cells resulting in hypertrophy of the Islands of Langerhans.

be taken of the spleen or kidneys or liver for this reason. The pancreas was of normal size and color. *Laboratory findings:* Maternal urine: sugar xxxx; acetone xx. Fetal urine: sugar xxxx; acetone xx (much cellular debris). Amniotic fluid: sugar trace; acetone trace. *Gross pathological diagnosis* of mother: Diabetes mellitus (maternal urine); bilateral hydronephrosis and dilated ureters with associated acute pyelitis of pregnancy; eight months pregnancy. Fetus: diabetes mellitus and acidosis (fetal urine).

Case 2.—J. R., a white woman, twenty-four years of age, has been under medical observation and care since 1922. Patient first treated for diabetes

She has noticed edema of her ankles for the past few months. She has had a cold the past week.

Past History.—Appendectomy for a gangrenous appendix in 1923.

Marital History.—Patient was married two years ago. She was delivered of a full term stillbirth one year ago.

Physical Examination.—The nose shows bloody crusts on mucous membrane, no discharge. The upper teeth are false. The lowers are in good repair. The tonsils have been removed. There is a mild pharyngitis. The breasts are full. A few moist râles are heard at the right base. Otherwise the lungs present no abnormalities. The heart is

not enlarged and the sounds are of good quality and regular. There is a systolic murmur heard at the base. There is a splitting of A2 and P2. The systolic blood pressure is 92; the diastolic is 68. The abdomen is enlarged to that of an eight months pregnancy. The fetal heart sounds are heard. There

rean and its mother was a very severe diabetic, for this reason the heart blood specimen was examined for sugar and N.C.N.; sugar reported as too low to read. Although the size of the pancreas did not suggest much hypertrophy, several sections were run through to determine the possibility of a hypo-

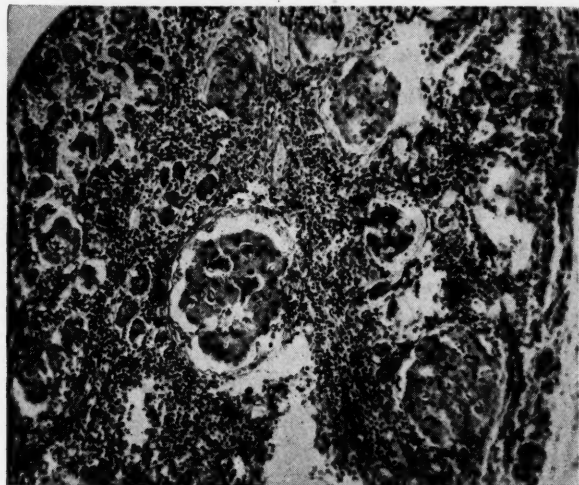


Fig. 3. A higher magnification of Case 3.

is a healed scar in the right lower quadrant. Otherwise examination is negative.

Progress.—The patient was admitted to the hospital at 5:30 p. m. A blood sugar taken immediately was reported to be .045 per cent. She was given intravenous glucose and at 8:37 p. m. she was delivered by cesarean section of a baby boy weighing 5 pounds 8.5 ounces. The baby expired at 5.05 the next morning.

Post Mortem Examination of Fetus.—The body is that of a very normal appearing white male, newborn baby, a few hours old. There were no external marks or anomalies. Main incision: revealed a normal panniculus. On opening the abdominal cavity, no free gas or fluid escaped. The omentum was only very slightly developed. The liver appeared normal for a newborn baby. Cut surface showed a slight congestion, otherwise normal. The gall bladder was contracted, but the biliary ducts were patent. The spleen appeared perfectly normal. Cut surface appeared normal. Kidneys appeared to be of normal size. Cut surface showed a very marked congestion, as well as a more acute inflammatory process. There were several areas of hemorrhage in the renal cortex. The adrenals appeared somewhat atrophic. There were no intra-adrenal hemorrhages. Stomach, duodenum, small intestine, and colon appeared normal throughout. On opening the thoracic cavity, both lungs were seen to be atelectatic. The left lung was completely collapsed. Over the surface of both lungs were numerous petechial hemorrhages, varying in size between 1-3 cm. There were also a few petechial hemorrhages over the pericardium. Pericardium was opened and a normal amount of clear, straw colored fluid was seen. The heart was of normal size, and on sectioning appeared normal. There was no evidence of any congenital cardiac anomaly. The thymus seemed to be slightly larger than normal, and was rather diffusely spread out over the surface of the pericardium. There was no evidence that it was producing any obstruction to the air-way, however. Pathological diagnosis: Fetal asphyxia with petechial hemorrhage of the lungs and pericardium; acute nephritis. Note: This baby was born by cesa-

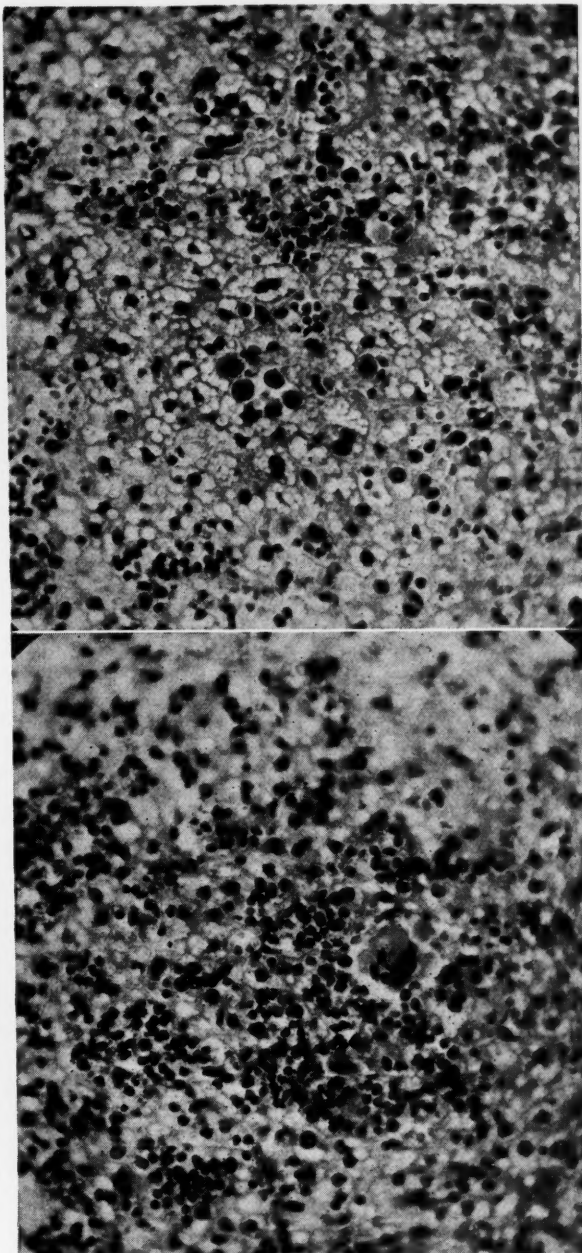


Fig. 4. Sections of the liver in Cases 2 and 3 showing the eosinophilia, the washed-out appearance of the cells, the presence of giant cells and other bone marrow cells in the tissue.

glycemic death. Laboratory reports: Post mortem blood less than .04 mgs. sugar per 100 c.c. of blood; N.C.N. 46 mgs. per 100 c.c. of blood.

Case 3.—W. H. G., a white woman, thirty-nine years of age, was first seen in 1931 for diabetes. She was admitted to the hospital March 1, 1934, for confinement and care of her diabetes. Her estimated date of confinement was March 14, 1934. She has had five previous pregnancies. The first, fourteen years ago, was a normal confinement. The second pregnancy terminated in a miscarriage. The

third pregnancy went to full term and she was delivered of a large dead fetus. The fourth pregnancy was also a full term dead fetus, which she says was as a result of trauma at confinement. The fifth pregnancy resulted in a miscarriage. The patient has been very uncoöperative in the care of her diabetes, and as a result has never been under control for any lengthy period.

Her past history is essentially negative.

Physical Examination.—The patient is poorly nourished. Her systolic blood pressure is 78. The diastolic is 54. The lungs show a few scattered râles through the upper half of the left lobe, heard both anteriorly and posteriorly. The abdomen is enlarged to that of a full term pregnancy. Otherwise physical examination is negative.

Progress.—The patient was delivered by cesarean section March 1, 1934, at 7:45 a. m. of a ten pound baby boy. The baby expired at 9:30 p. m. of the same day.

Post Mortem Examination of Fetus.—External Inspection: the body was that of a newborn, well developed and well nourished male child. There was very marked post mortem hypostasis of the dependent parts of the body. The body was partially frozen, having been kept in the icebox over night. *Main Incision:* revealed a normal panniculus. On opening the abdominal cavity, no free gas or fluid escaped. The thorax was then opened. Both lungs were seen to be atelectatic with practically complete collapse. All of the organs, including the neck organs, were then removed en masse and dissected outside the body. The thyroid appeared perfectly normal in size and on cut section. The thymus gland was about half again larger than it should be for the development of this baby. The size, however, did not apparently cause any obstruction to breathing. The lungs were practically completely collapsed and on section had a grayish red color. There was no crepitation, but rather marked congestion. None of the pulmonary tissues contained sufficient air for floating. The lungs felt very firm. The heart was of normal size and on section appeared normal throughout. There was no evidence of any congenital cardiac anomaly. There were a few petechial hemorrhages over the pericardium, and also a few in the periphery of the lung tissue. The liver appeared to be of normal size. Cut surface showed a moderate congestion, otherwise appeared normal. The gall bladder contained a very small amount of greenish yellow bile. There was no evidence of any obstruction of the biliary ducts. The pancreas appeared to be of normal size and normal consistency. Cut surface appeared normal. Sections were taken throughout the head and all along the body of the pancreas and prepared for microscopic study. Both adrenals appeared normal. Considerable post mortem degeneration. The spleen appeared normal, cut surface showing a slight amount of congestion. Both kidneys showed marked persistence of fetal lobulation, but on cut surface the renal tissue appeared normal. Pelvis and ureters were both normal. Pelvic organs appeared normal. Stomach, duodenum, small intestine and colon appeared normal throughout. *Head:* The calvarium was opened along the suture line and the brain was removed. No evidence of any cerebral hemorrhage. There were a few very small petechial hemorrhages scattered throughout the cortex, the largest being the size of the head of a pin. There was rather advanced post mortem softening and the brain was sectioned immediately. No other pathology seen. *Gross Pathological Diagnosis:* Fetal asphyxia with practically complete atelectasis of both lungs. Persistent fetal renal lobulations. *Note:* This baby was born by cesarean section of a severe diabetic mother and blood sugar studies

were made. The blood sugar from the placenta, taken at birth, was reported to be 0.07 per cent. The blood sugar from the heart, taken at post mortem examination, was reported to be 0.04 per cent. For this reason the pancreas was removed and numerous sections made throughout its length for the study of the Islands of Langerhans.

Dr. William L. Brosius has made a thorough study of the sections on these autopsies and the report is herein given: The gross pathology was not remarkable except for the large size of the babies. Sections of the pancreatic tissue from the mother of Case 1 showed the typical fibrosis and hyalinization of the Islands of Langerhans described by Opie in diabetics. The pancreatic tissue from all the babies showed an enormous hypertrophy and hyperplasia of the insular tissue. In the islands, the individual cells were large, with abundant cytoplasm, and markedly increased in number, resulting in an increase in island size, in some instances as much as six to eight times the average diameter in the normal newborn pancreas. The islands were also greatly increased in number, so that in some areas approximately 50 per cent of the tissue was insular tissue. In a few small areas there was an infiltration of small nests of island cells. In and around the islands was an abundant infiltration of eosinophiles which in some areas between islands was so extreme that more than 50 per cent of the cells were eosinophiles. There were a few lymphocytes, scattered and in collections. The acinar tissue showed no remarkable deviation from the normal picture. The livers of the babies showed an extreme grade of erythropoiesis, suggesting a myeloid change. Early cells of the erythroblastic and leukocytic series were present in large numbers. Megakaryocytes with bizarre nuclear forms were especially common. The cords of liver cells were thinned and the cells had a washed out appearance. In Case 3 they were remarkably reticulated and vacuolated and took very little stain. The other tissues examined, including the pituitary body and suprarenal bodies, showed no notable variation from normal tissues of the newborn.

Case reports are herein presented of three patients with a definite diagnosis of diabetes mellitus. All three patients were confined and autopsy findings of the infants presented. The gross pathology was not remarkable except for the large size of the babies. This finding agrees with the previous observations made by many clinicians.

In the microscopic pathology, the findings in the pancreas were very interesting. There was an enormous hypertrophy and hyperplasia of the insular tissue. The cells in the islands of Langerhans were very large and markedly increased in number. The islands were six to eight times the average diameter in the normal newborn pancreas, and were greatly increased in number with an abundant infiltration of eosinophiles in and around the islands.

In a study of a large number of diabetic mothers, it is noted that the diabetic condition in these mothers is improved from the second to the seventh month of their pregnancy. In order for the severe diabetic mother to metabolize the increased amount of carbohydrate ingested, it is necessary that there be more insulin present than the mother can supply. It is reasonable to assume that this increased supply of insulin is derived from the pancreas of the fetus, or that the fetus metabolizes the surplus carbohydrates with the insulin it produces. By reason of this fact, there is a greater supply of carbohydrates to the fetus than normally. This would account very logically for the increased size of the fetus at term. Because of this increased supply of carbohydrates to the fetus or the increased demand on the part of the mother for insulin, there results a demand hypertrophy and hyperplasia of the pancreatic tissue.

As the fetus continues to grow in utero, the pancreas is able to secrete more and more insulin, and capable of metabolizing larger amounts of carbohydrates. As the supply of carbohydrates is diminished in proportion to the increasing supply of insulin, relatively, the fetus begins to suffer a greater danger—that of hyperinsulinism. This is substantiated by the extremely low blood sugars reported to be present in the blood taken from the heart at post mortem examination.

In reviewing the literature, we find that very little has been written concerning this subject. Ronsheim in 1933 found a few cases in the literature where patients were improved during their pregnancies. Heilberg (1928), after studying the pancreas of infants born of diabetic mothers, found that the islets were increased; he even counted the islets and found them to be increased in actual numbers. Dubreuil and Anderodias studied the dead fetus of a diabetic mother and found an increase in the number of

islets. Gray and Feemster found that the pancreas of a child born of a diabetic mother contained approximately twenty-four times as much insular tissue as a normal pancreas. Feldman, Wiener, and Skipper have found a similar pathology. Skipper theorized that the hypertrophic islets would be expected to secrete an abnormal amount of insulin and they felt that the child of a badly treated diabetic mother, if alive, is in danger of succumbing from hypoglycemia developing after birth. Feldman also found in the fetal pancreas of his case that there was a definite hypertrophy as well as edema and interstitial pancreatitis. Nevinny and Schretter, together with Holman and Mathieu, have made a study of the blood sugars of normal and abnormal mothers and babies, and they found that in the normal cases the blood sugar in the infant was in the same range as found in the adult. In the abnormal cases, the blood sugar usually became very low, especially after birth. Drs. Carlson and Drennan, as early as 1911, in a study of this group of cases took bitches who were pregnant and removed the pancreas. They found that in these dogs the diabetes was better during the pregnancy, and concluded that this was due to the increased insulin given by the fetal pancreas of the puppies in utero.

In the treatment of a pregnant diabetic patient there should be a close coöperation between the internist, the obstetrician, and the pediatrician. The diabetic patient should be under control in regard to her dietary and insulin requirements before she becomes pregnant. During her pregnancy, her diabetes should be completely controlled by diet and insulin in order not to put any increased demand on the fetal pancreas. The child, at birth, should receive large doses of glucose if any signs of hyperinsulinism are present.

Conclusions

The cause of fetal death in the diabetic mother is due to hypoglycemia resulting from hyperinsulinism. The hyperinsulinism occurs as a result of the hypertrophy and hyperplasia of the islands of Langerhans, due to the demand on the part of the mother for insulin. The fetus is large as a result of the increased metabolism of carbohydrates on the part of the fetus.

METAPHEN DERMATITIS*

Report of Two Cases

G. H. BELOTE, M.D., and DON MARSHALL, M.D.†

ANN ARBOR, MICHIGAN

Since its introduction as a skin disinfectant, metaphen (the anhydride of 4, nitro-5-hydroxy-mercuri-ortho cresol) has enjoyed a slow but gradual increase in popularity. It has been repeatedly pointed out that a chemical designed for this type of work must, as one of its prime requisites, be nonirritating, and metaphen seems for the most part to have met this requirement. In their original article, Raiziss and Severac³ found the substance nonirritating, in the dilutions used, to the eye and mucuous membranes of experimental animals, and later Scott and Birklang⁴ stated that repeated applications of the acetone-alcohol-aqueous solution apparently did not injure the surface epithelium. Practically no one else has commented particularly on the irritative or nonirritative qualities of metaphen and up to the present we have been able to find but one case of metaphen dermatitis in the literature. This was recently reported by Pascher and Silverberg.²

At the present time many preparations of metaphen are in use. The aqueous "Metaphen 2500" is the most common for ocular and mucous membrane use, while the "Metaphen tincture 1:200" is the one commonly used for preoperative disinfection of the skin. This consists of metaphen 0.5 per cent, alcohol 50 per cent, acetone 10 per cent and water 39.5 per cent and is the preparation we are especially interested in.

This preparation of metaphen has been used in the Departments of Ophthalmology and Neurological Surgery as a preoperative measure for some time on approximately 400 cases. For the most part it has proved nonirritating, but in the group we find two cases who developed a very marked dermatitis in the areas to which the metaphen tincture was applied and we think there is little doubt as to the agent which produced the dermatitis.

Report of Cases

Case 1. F. F., a white man of forty-three years, was admitted to the University Hospital on September 21, 1932, complaining of blindness. Examination in the Department of Ophthalmology revealed dense corneal opacities of both eyes for which a bilateral iridectomy for visual purposes was performed on October 10, 1932. Up to the time of operation the face presented no eruption of any sort. The usual ward preparation was carried out and

at the time of operation the skin of the lids and surrounding region was painted with tincture of Metaphen 1:200. On the evening of the first post-operative day the patient complained of itching and burning around the eyes, bridge of the nose and malar eminences. Examination revealed a considerable edema and erythema in the area painted with metaphen and also one small isolated patch of similar eruption on the lobe of the left ear. On the following morning the patient was seen in the Department of Dermatology where the following description was given: "The patient presents an eruption confined to the face and lobe of the left ear. It is arranged in a butterfly shape over the nose, above the eyebrows and involving the cheeks. This consists of an acute erythema and edema with superimposed pinhead size vesicles. There is in addition some weeping and the lobe of the left ear presents a nickel size similar patch." This was diagnosed as dermatitis venenata probably due to metaphen.

Case 2.—I. H., a white woman of sixty years, was admitted to the University Hospital on December 2, 1932, complaining of poor vision. Examination revealed bilateral sclerosing cataracts. Extraction of the right lens was performed under local anesthetic on December 8, 1932. The skin preparation was the same as in Case 1, except that only the right side was prepared. On the second postoperative day an erythema and edema was noted in the region painted with metaphen and the subsequent dermatitis was closely similar to that noted in Case 1. When seen in the Department of Dermatology the patient "presented an eruption confined to the right side of the face and chiefly around the eye. There was marked edema and erythema and while no definite vesicles were found there was considerable weeping and crusting." A diagnosis of dermatitis venenata, probably due to metaphen, was made.

Both cases were treated locally by means of saturated boric acid wet dressings and calamine lotion and recovered from the acute dermatitis in approximately ten days.

Experimental Data

Following the development of the eruption in Case 1 and on the basis of our suspicion that it was due to tincture of metaphen, patch tests were carried out using tincture of metaphen on one arm and acetone on the other. The reaction to metaphen was distinctly positive, while that to acetone was negative. Since the other ingredients of the tincture are alcohol and water, patch

*Studies and Contributions of the Departments of Dermatology and Syphilology, and Ophthalmology of the University of Michigan Medical School, services of Dr. Udo J. Wile and Dr. George Slocum.

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tests with these materials were not considered necessary.

On Case 2 patch tests were carried out using tincture of metaphen, mercurochrome

ly positive tests in a group of sixteen patients who apparently had normal skins. Of this small group test, women seemed a little more sensitive than men.

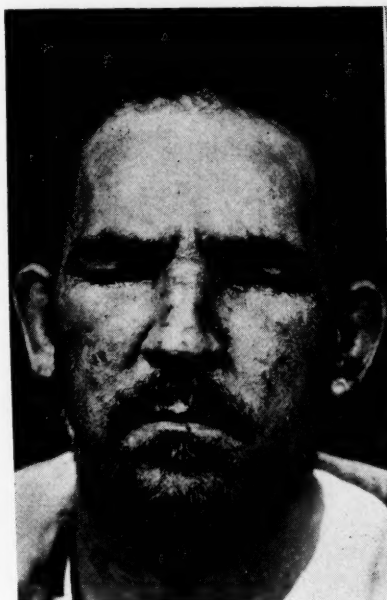


Fig. 1. Case 1. Showing marked edema and dermatitis in the region of the eyes and bridge of the nose.

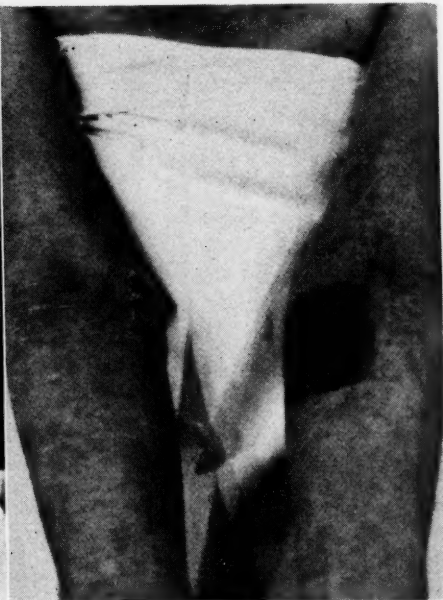


Fig. 2. Result of patch tests in Case 1. Positive to metaphen tincture on patient's left and negative to acetone on the right arm.

(1 per cent), mercuric chloride (1:3000), atropine (1 per cent), and acetone (full strength). Atropine and acetone were negative, but all of the first three containing mercury were positive to some degree. Mercuric chloride and mercurochrome yielded mildly positive tests, while the test with tincture of metaphen reacted so severely that the patient complained very bitterly and refused to allow further experimentation. It resulted in a large bulla covering the entire area of the test.

Following this experience we decided to test a number of apparently normal skins to tincture of metaphen. Part of these tests were carried out following the usual procedure in patch tests, which consists of applying the substance to be tested tightly to the skin by means of adhesive plaster. The remainder of the tests were performed by painting the skin with tincture of metaphen, allowing to dry and covering with loose, dry gauze so as to more nearly approximate conditions as they exist postoperatively. In no case did the second procedure produce a dermatitis. Carried out as a true patch test according to the first procedure, however, we produced three strongly and three weak-

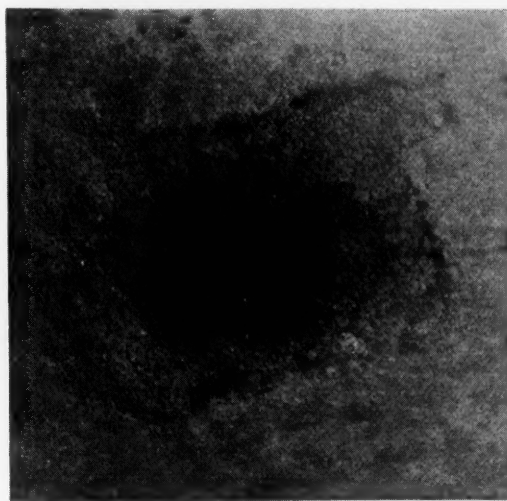


Fig. 3. Close-up of positive patch test to metaphen tincture on the back of Case 1.

Comment

Where numerous local agents are employed in any case, as is commonly done with preoperative ophthalmological cases, it is exceedingly difficult to fix the blame for a subsequent dermatitis on any one drug. Atropine (1 per cent) is commonly used in these cases and we all know that this drug

is occasionally responsible for a dermatitis. Also in the routine ward preparation, the skin around the eyes is washed with a weak mercuric chloride solution and at the time

tincture was strongly positive and in the second case excessively so. We believe we have reasonable evidence that the dermatitis in these two cases was caused by tincture of



Fig. 4. Case 2. Showing marked edema and dermatitis limited to the side operated on.



Fig. 5. Result of patch tests on the arm of Case 2. Above mercurochrome (1 per cent) mildly positive; center tincture of metaphen, excessively positive; below atropine (1 per cent) and acetone (full strength) are negative.

of operation a single drop of mercurochrome (1 per cent) is instilled into the eye.

The patient represented by Case 1 was not tested with atropine, mercuric chloride or mercurochrome and hence except through inference we are not able to definitely exclude these substances. Case 2, however, was tested with these drugs and found negative to atropine. While she was mildly positive to the patch test with mercurochrome, it seems unlikely that the instillation of a single drop could spread widely enough to cause the dermatitis. Also the skin in the operative area is usually washed with mercuric chloride solution (1:3000) the morning of operation, but this substance is immediately washed off with sterile water and sterile pads applied. Since this does not remain in contact with the skin and since the second case reacted very mildly to this substance when tightly applied to the skin for twenty-four hours, it would seem unlikely that the dermatitis came from mercuric chloride.

The patch test in both cases to metaphen

metaphen. Since, however, Case 2 also reacted mildly to mercuric chloride and mercurochrome, it is also likely that these patients would have developed a similar dermatitis had these substances been used in sufficient concentration in the same location. We therefore incriminate tincture of metaphen, not for the drug itself, but merely as another carrier of mercury.

Although not a published observation, Dr. H. L. Keim¹ tells us that he has seen dermatitis of the foot develop following the application of tincture of metaphen in treating a mycelial infection.

Conclusions

1. Two cases of dermatitis are presented which we believe due to tincture of metaphen.
2. When painted on the skin and allowed to dry, as ordinarily used in operative work, the drug seems relatively nonirritating.
3. When bound onto the normal skin after the fashion of the usual patch test,

tincture of metaphen is likely to prove irritating in 50 per cent of cases.

For permission to use this material, we wish to thank Dr. Udo J. Wile and Dr. George Slocum.

CARBON TETRACHLORIDE AS AN INDUSTRIAL HAZARD

Paul A. Davis, Akron, Ohio, points out that Wirtschaffer reported recently a number of cases in which a toxic amblyopia was present and stated that the examination of the visual fields may be a valuable procedure for the early detection of carbon tetrachloride intoxications. There have been several cases reported in which carbon tetrachloride produced fatty degeneration of the liver, kidneys and heart with a subsequent necrosis. The action of carbon tetrachloride is similar to that of chloroform except that it is more intense. This is due to the larger amount of hydrochloric acid liberated as it is broken down in the body. Carbon tetrachloride plus hydrogen plus oxygen plus the influences of the body produce four molecules of hydrochloric acid, plus the oxidation products of carbon, carbon monoxide, and intermediate oxidation products, the most poisonous of which is carbonyl chloride or phosgene. Alcohol seems to act as a catalytic agent for carbon tetrachloride and intensifies its action. A person who is under the influence of alcohol when exposed to carbon tetrachloride becomes disoriented and often becomes maniacal. It may be absorbed by the inhalation of its fumes and alimentary system absorption. Carbon tetrachloride is sometimes given in small doses as a medicament for hookworms and in a short time it is followed by a purge, which prevents much absorption. Also it may be absorbed by the skin and its appendages. Carbon tetrachloride extracts the fats from the skin and produces a dry condition, which favors absorption and also initiates a dry dermatitis, causing the skin of the hands to crack. This often produces avenues for secondary pyogenic infections. The condition can be corrected if the workmen will use oil of theobroma, petrolatum or a good grade of ointment of rose water (nonvanishing cream) on the skin after having used carbon tetrachloride. The principal avenue of absorption is the respiratory system. The nausea and vomiting produced by exposure to carbon tetrachloride is due to a central nervous system reaction and not a local gastric one. If the concentration of the carbon tetrachloride is kept at a minimum and the circulation of air at a maximum, few symptoms are noticed. A concentration of 0.01 per cent and lower can be tolerated for long periods of time. However, continued exposure to carbon tetrachloride of low concentrations is not advocated, for slow absorption produces the chronic stage of the poisoning and the retrograde changes in the liver, kidneys and the hematogenic organs. Substitution products should be used in place of carbon tetrachloride in all processes in which the change is possible. The workers should be rotated so that one person has a chance to aerate completely and eliminate the products of carbon tetrachloride decomposition while the other is working. The condition that usually follows nausea and loss of appetite is acidosis, and this is manifested readily in those who perspire freely. An irritative dermatitis which becomes annoying develops in the folds of the body. (*Journal A. M. A.*, Sept. 29, 1934.)

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OBSTETRICS VERSUS MIDWIFERY: CHAIRMAN'S ADDRESS

JOSEPH B. DE LEE, Chicago, points out in his address that the dictionaries give the terms obstetrics and midwifery as synonyms, but he believes that the term midwifery should apply to the practice of caring for women during childbirth by the old blind, empirical methods, while the term obstetrics should connote the fact that to the wisdom gained by experience has been added all the knowledge supplied by recent scientific investigation. For 1,500 years after Christ, midwives and slave doctors had almost complete sway in the delivery chamber. The midwives pursued every device to retain their control and the doctors could learn nothing of normal delivery. The fact that they were helpless in obstructed labors, except for their destructive instruments, made their situation worse, because, as Smellie said, the women took great alarm when a man midwife was to be called, since they knew that then either the mother or the baby or both were lost. The invention of the obstetric forceps, about the beginning of the eighteenth century, gave the greatest impetus to the movement to have men attend women in labor, but until very recently the practice of normal obstetrics by physicians has been looked down on by the profession and by the public as well as by the midwives. Some of the old opprobrium still clings to the obstetrician and his work. The medical schools, in many universities, still rate obstetrics as a minor specialty, and even today students leave their campuses with a debased opinion of the science and art of obstetrics. Hospitals do not provide facilities for obstetrics that are the equal of those for surgery. The author has striven during all of his medical life to eradicate this low opinion of obstetrics and to place on equally high pedestals the three primary branches of medicine, obstetrics, medicine and surgery, all equally important, all equally dignified. It is therefore with great pain and some alarm that he noticed a trend in Britain and in spots of the Eastern seaboard, a reactionary trend, toward the state of midwifery. He discusses disturbances of pregnancy, labor, natural delivery and concludes by saying that there are not enough schools, teachers, materials or public and professional support to supply real obstetricians for 2,000,000 births each year. Fortunately the principles of the conduct of labor are not difficult to master. Nature is still on her job and, though perhaps somewhat destructive, she can do it better than unskilled human beings. Let doctors be taught the beauties of normal obstetrics, the principles of sepsis and the principles of intelligent expectancy, trusting much to nature. There will soon be a reduction of the national maternal mortality and morbidity. In the meantime the medical profession can hold the vision of its ideals and struggle to attain them, and it will attain them only through education—education of the medical schools, of the universities, of the doctors and of the public.—*Journal A. M. A.*, Aug. 4, 1934.

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MARCH, 1935

EDITORIAL

THE COMMON COLD

The common cold would be a comparatively harmless complaint were it not for its possible complications. The fact that it is often preliminary to influenza, pneumonia and sinus and middle ear and mastoid infections and what have you, makes it a very serious affair. For this reason we devote two rather lengthy papers to the subject by Dr. Perrin H. Long of Johns Hopkins Medical School which were presented at Battle Creek at the annual meeting of the Michigan State Medical Society.

Elsewhere in this number Doctor Long discusses the value of various prophylactic measures which have been used for the prevention of colds. His conclusions are very brief and decisive. We will not anticipate a reading of his paper by presenting them here. The method of examination of the prophylactic measures has been very truly scientific, consisting of experimentation and control. The common cold was dealt with at length in a paper in the December number of the JOURNAL. The two papers should be read together, since they constitute a monograph on a subject that has hitherto not received the attention from clinicians that its importance warrants. Unfortunately the common cold is a condition which has been treated too often by self-medication with remedies recommended by proprietary medicine vendors.

TREATING TUBERCULOSIS

The modern treatment of tuberculosis may be epitomized in one word—rest. Of course there are other important factors such as nutrition, pure air, sunlight, but the greatest single factor is rest. Impaired tissues, no matter what portion of the body, are given the best chance for repair when put at rest. In the case of pulmonary tuberculosis it is not sufficient that the patient should be given bed rest, important as that is. The principle of rest must be extended to the damaged lung, even to the lesion itself. This is accomplished by "splinting" the lung as it were by surgical means; in the incipient cases by compression of the phrenic nerve that prevents for a time the movement of the diaphragm on the affected side. Collapse therapy whereby air is injected into the pleural cavity is often indicated whereby the lung is collapsed towards the mediastinum. The principle behind it all is the same—rest.

The technic of the operative treatment can be easily mastered by one who has surgical experience and often by those whose experience is limited to this single operation, provided, care and judgment be exercised. A knowledge of the disease and the willingness to devote one's time to the care of this class of patient is of course highly desirable.

MASTOIDITIS

The x-rays constitute an important diagnostic aid in practically every condition which is characterized by a variation in density of the organs or tissues involved. The late Doctor Hickey was accustomed to emphasize the importance of radiographs well made and expressive of the finest detail. While the importance of technic cannot be overestimated, the importance of a knowledge of pathology from the viewpoint of variations in density, resulting from acute or chronic disease, is equally great. This fact places the roentgenologist in the position of consultant to the clinician or surgeon. Hence, the need of supplying him with the history of the patient's illness along with the request for an x-ray examination.

In a study made of x-ray findings and their correlation with the findings at operation in cases of mastoiditis, Rendich* makes a plea for closer coöperation between roent-

*The Mastoid Roentgenograph, R. A. Rendich, *Medical Times and Long Island Medical Journal*, January, 1935.

genologist and otologist. Frequently the roentgenologist's interpretation requires re-interpretation to the clinician. The latter, however, should understand that the x-ray report is based on visual appearance of any density variation from the normal. This is the roentgenologist's viewpoint. In case of acute mastoiditis the condition is subject to sudden changes, so that the roentgenologist's report does not hold good several days after the examination. It was found (Rendich) that in 92 per cent of cases, the radiographic examination was of distinct advantage in arriving at a decision before operation. Eight per cent of roentgenologists' reports for various reasons was misleading. The majority of the discrepancies occurred in patients under five years. This is to be expected inasmuch as the infant mastoid cells are rudimentary, and at times it is impossible to procure diagnostic films.

The operator should be, and doubtless is, guided by the condition of the patient clinically as well as by the roentgen findings before deciding upon surgical treatment.

FOOD FADDIST

A speaker, Dr. T. B. Rice, bacteriologist who addressed a meeting of the Women's Auxiliary of the Wayne County Medical Society in January, caused some commotion (not among his immediate audience) for some alleged heterodox pronouncements on the subject of diet. He said a great deal that runs counter to advertising propaganda with which the laity are fed up by radio and by the various journals on housekeeping that go into the homes. The speaker received more than usual attention from the newspapers. In other words, his address was news. It was news that spinach was not the important article of diet that it is commonly held to be by the layman and particularly the laywoman. It was news that vitamins, while important, are overstressed and exploited by those with something to sell.

It is high time the food faddist receive a jolt. Professor Martin B. Rehfuss of Jefferson Medical College, in a recent address before the American Dietetic Association, is reported as saying, "Diet faddists have reached a point where they are a positive menace to the health of the community and an insult to the reasoning of intelligent men and women," and Professor Murphy of

Harvard (Nobel prize in medicine) declared, "Undoubtedly they (the new diet fads) form one of the most pernicious publicity schemes available because they are publicity schemes for someone or something."

Vitamins are necessary for health. It would be difficult, however, in a normal regimen such as that on which our ancestry subsisted since the beginning of life upon the planet to avoid them, since they are present in the most common articles of food. Sir Walter Fletcher, an English nutritional chemist, speaking of Vitamin D, known as calciferol, the only vitamin it has been possible to isolate in pure crystalline form, says "a single ounce of it would suffice to give a full daily ration for a million growing children."

TRUSTING BRAINS

"Ramsay MacDonald tells England that the Empire should get ready for a boom year, that Great Britain is definitely on the way out of the depression. The remarkable thing about it is that business was able to recover without any help from any brain trust."

—*The Detroit Free Press*

Brain Trust: We have always felt it to be the nation's advantage to have men representing us who were more or less scholars in history, political science and economics and as many other departments of human knowledge as possible. In England the "brain trust" is right inside of the houses of parliament. Politics is a career and men qualify for it at Oxford and other universities in much the same way as in this country they qualify for medicine or law; of course there are a few exceptions in England, not many. It has been said that it is possible to obtain an expert opinion in the British House of Lords on any subject from shoeing horses to philosophy or chemistry. That is probably the reason they do not call on a brain trust outside of parliament.

PRESERVE YOUR JOURNALS

This advice appears in many State Medical Journals at least once a year. The best way to preserve the JOURNAL is to have the twelve numbers of the year bound into a volume. The cost of binding is from two to four dollars, depending on the style of cover. A yearly index is supplied with the December number to facilitate ready reference.

Many letters are written to the secretary and to the editor asking information on various subjects. Both editor and secretary are pleased to answer any queries within their power. The writing and answering of letters necessarily causes some delay which would be obviated in many instances by referring to bound volumes of the JOURNAL. The February and the November numbers are particularly important, the former containing the minutes and proceedings of the annual meeting of the Council, and the latter the proceedings of the annual meeting of the Society with the verbatim report of the deliberations of the House of Delegates.

Five in a Hill

Awa back awhile when we lads on th' fairm
Had oor lessons tae learn, in plantin' th' corn;
Tae be carefu' an' savin' an' work wi' a will
An' pit th' corn kernels just five i' a hill.

An' when we dug taties in th' fa' o' th' year,
Wi' fingers nigh frozen, an' e'es wi' a tear,
Oor faithers wid smile when th' bag we cud fill
Wi' th' spuds that were grown, 'boot five i' a hill.

Bit we never gi'ed thocht tae carry th' stunt
Awa frae th' fairmin', tae ony auld front,
Bit th' Dionnes advanced far ayont oor auld mill
An' raised some fine lassies, just five i' a hill.

What a mess we hae made in oor plowin' oop corn,
Instead o' politicians—ill bred an' ill born.—
Lord! gi' us mair Dionnes, tae raise an' tae till,
Some guid politicians, 'boot five i' a hill.

WEELUM.

AGITATION FOR IMMEDIATE ACTION ON HEALTH INSURANCE

(*Journal of American Medical Association*)

A letter is apparently being circulated by the American Association for Labor Legislation asking those to whom it is addressed to send telegrams immediately to Secretary of Labor Frances Perkins and the President urging immediate action on the subject of health insurance. Apparently the propagandists are not content to await the report of the President's Committee on Economic Security, of its technical staff or of its various advisory boards, but desire, regardless of the economic situation of the country as a whole or of any other important factors that may be involved, to jam some sort of legislation through immediately. Physicians whose advice may be asked concerning this appeal on the part of the American Association for Labor Legislation may well inform their inquirers of the desirability of caution and consideration in the development of any new methods of medical practice. Haste and carelessness prompted by evangelistic methods for social legislation must inevitably lead to errors and result in harm to both the public and the medical profession. The experience of every foreign nation precipitated into a sickness insurance scheme is evidence of the unfortunate possibilities that are incurred in the precipitous adoption of revolutionary measures.

A MOMENT OF MEDICAL HISTORY

J. H. D.

THE X-RAYS

Perhaps there is no other diagnostic agent or device that has been so generally useful to the medical profession as the x-rays. This statement is made advisedly for there is no device or method which has not its limitations. The x-rays are indicated in disease conditions which are marked by variations in density from the normal. Their value, it may be further stated, depends upon the knowledge, skill and experience of the radiologist or roentgenologist (a name coined from that of the discoverer) in much the same way as the usefulness of a scalpel depends upon the knowledge and skill of the surgeon.

In these papers the writer has endeavored to describe the development of methods and devices, such as apparatus, that have aided in the evolution of modern medicine and surgery. So far as the x-rays are concerned, we have to consider both apparatus and method. The former is the result of the application of theoretical physics and chemistry; the latter is based upon clinical research. Referring again to the surgeon and the scalpel, the surgeon's knife is a simple implement; his skill is the result of study and practice. Mechanically x-ray apparatus is very complex. Those who devote their entire time to radiology, a comprehensive term including radiography and radiotherapy, feel that the skill required for the application of the rays is as great as that which produces a competent surgeon.

While the year of discovery of the x-rays is 1895, they have a long and interesting prehistory. None who is unacquainted with the discovery would think of associating x-rays with the air pump and high vacuum. The fact is the development of the air pump and pneumatic physics had to reach a high state of completeness before the tubes necessary for producing x-rays were possible. Perhaps there is no better illustration how a subject of purely theoretical physics, of no apparent utilitarian value, may turn out to be of the greatest service to mankind. The simple apparatus employed by Roent-

gen was the result of three centuries' development by many workers in physical science, including students of pneumatic physics and of electricity. We have Gilbert (1540-1603), who discovered magnetism and who was physician to Queen Elizabeth; Torricelli, whose name is associated with the "empty space" or vacuum; von Guericke, whose name is linked with the Magdeburg's hemispheres, which were pictured graphically in a tug-of-war between teams of horses set to pull apart the hemispheres of a sphere exhausted of air. Robert Boyle, the English pneumatic physicist, was instrumental in the development of the air pump and exhausted bell jar, taking up the work where von Guericke left off. Then, in the field of electricity we have Franklin, Galvani, Volta, Ampere, Ohm, Faraday, Henry, Plucker, Geissler, Hittorf, Hertz, Lenard, Crookes. Francis Hauksbee (died in 1713), an Englishman, interested himself in electricity and repeated many of the experiments of Gilbert and von Guericke. He built electric machines which were a vast improvement over the work of his predecessors. Geissler was a modest glass blower at the University of Bonn who attracted attention by the excellent quality of his work, which made the experimentation of his more erudite contemporaries and followers a success. His skill won for him the honorary degree of Ph.D., conferred upon him by the University of Bonn in recognition of his valuable assistance in those branches of physical research in which his products were used. Truly science is international in its scope.

The perfection of the air pump made possible the vacuum or near-vacuum tube. The earlier x-ray tubes contained a rarefied atmosphere of gas or air. The attempt to pass a current of electricity through the partially exhausted tube led to the discovery of cathode rays, which discovery was made by Sir William Crookes, an English physicist, by whom the rays were named.

Experimenting with Crookes tubes, which were a development from those made by Geissler, Hittorf and Lenard, Roentgen by a fortuitous accident discovered the x-rays. The Crookes tube with which Roentgen was working was closely covered with a coating of black paper opaque to ordinary light. While passing electric discharges through the evacuated tube, a small platinum-barium-cyanide screen was seen to fluoresce, which phenomenon indicated the presence of other

than ordinary light; namely, light that possessed the property of penetrating opaque material. Roentgen repeated the experiments to confirm the peculiar phenomenon. The discovery in October, 1895, was hailed with great acclaim by the press throughout the world. The nature of the peculiar light was not known at the time so it was designated by the algebraic symbol, x-rays, a name which caught popular fancy to such an extent that the rays will doubtlessly be so known in spite of later studies which have revealed their real nature.

Soon after the discovery, the "x-rays" were turned to diagnostic use in medicine. Within recent years they have also found an important place in experimental and industrial work. Through their aid chemistry and physics have advanced beyond the wildest dreams of the later Victorian scientist.

Unfortunately the dangerous nature of the x-rays was not discovered until much damage and loss of life eventually occurred among the earlier workers. The biological effect of x-rays has since received much attention by students so that a very important method of treatment known as radiotherapy has been developed, a subject that had better be left to those thoroughly trained in the use of x-rays. Perhaps there is no specialty in medicine that demands greater skill of the physician than these, still more or less mysterious, rays. They have been found to be destructive to embryonic tissue, a characteristic which renders them important in the treatment of malignant growths. In this respect the action on living tissue is similar to that of radium.

The first use to which they were put was the diagnosis of bone lesions, particularly fractures, for bone pathology had yet to be developed from a new viewpoint, namely that of density of structure. Studies were made soon after the discovery of the x-rays, principally by Professor W. B. Canon, on the alimentary tract of animals by means of the opaque meal of bismuth salts incorporated in some suitable medium. Canon's experimentation was carried out on cats and geese. The first use of opaque media in diagnosis of conditions affecting the alimentary tract in man began with the esophagus in which bismuth subnitrate mixed with food was used to determine the presence or absence of diverticuli. Credit goes to Williams of Boston. The first diagnostic work on the stomach was done by including the

contrast medium in a sausage casing as a container. The medium consisted of lead and mercury. The toxic nature of such a medium, it goes without saying, required encasement in a flexible covering. The difficulty of obtaining bismuth subnitrate in pure form in sufficient quantity and still nontoxic delayed somewhat extensive studies on the alimentary tract of the human. However, the insoluble salt of barium, barium-sulphate, was eventually found to possess all the qualities necessary for a perfect opaque or contrast medium for the examination of the gastrointestinal tract. Its use has enabled roentgenologists to study living visceral anatomy, including the position, peristalsis and other factors not known before. Not only is he able to study mechanical factors of normal digestion, the roentgenologist has been able to determine the nature and position of organic lesions with amazing exactness.

The principle of opaque medium has been carried beyond the gastrointestinal tract. It includes also the dye method† of examining the gallbladder, whereby a dye is given by mouth or by vein into the blood stream and excreted into the gallbladder. By this method it is possible to determine the gallbladder function or to ascertain with a fair degree of accuracy the presence or absence of gallstones. The dye has a sesquipedalian name, tetraiodophenolphthalein. Under the heading of opaque media might also be mentioned the method of outlining the kidney pelvis, ureters and bladder by means of dye, which is known by several trade names. The outlining of the kidney pelvis and ureters by solutions of high molecular density injected by means of ureteral catheters under cystoscopic direction has been in use for a number of years. (Since 1910.) The intravenous injection of a dye is of more recent date. The latter method has certain advantages; among them it constitutes a test of renal function as well as a method of determining possible anatomical anomalies. Lipiodol, an iodized oil, is used to bring into relief the bronchial tree or abscess cavity in the lung as well as to determine the patency of the fallopian tubes. A paste made of bismuth salts and petrolatum serves well in

outlining sinuses in the tissues of the body.

Air also serves as a contrast medium, particularly in the encephalogram. An operation once known as pneumoperitoneum, whereby air was introduced into the peritoneal cavity to bring the solid abdominal viscera into relief, was once the vogue but has to a large extent fallen into disuse.

The development of x-ray apparatus has gone on apace within the brief period of the discovery of about four decades. The interrupterless transformer and the hot cathode tube* were perhaps the greatest contributions since 1895. Since then there have been numerous refinements, particularly in tubes and mechanism of control.

The fluorescent screen has been perfected so as to shorten very materially the exposure time in making roentgenograms. This has made possible the making of roentgenograms in a fraction of a second, important where visceral motion is a factor to be overcome, as well as safety to the patient, preventing overexposure, which is fraught with more or less danger in making examination of the head.

The fluoroscope is made of fluorescent screen, the same as that which led Roentgen to discover the peculiar rays. It has been used in radiography or radioscopy ever since and more particularly since the invention by Coolidge of the hot cathode tube which is capable of regulation to a constant current. The fluoroscope enables the operator to observe that kind of function which is manifest in movement such as the movements of respiration and gastric and intestinal peristalsis. It is convenient also in the visualization of radiopaque foreign bodies but it should not be relied upon for anatomical detail, which may be studied to advantage only in well made radiographs.

The development and improvement of x-ray apparatus would avail but little if there were not a concurrent improvement in the recording media. The situation is not unlike the relation of the evolution of the automobile to the concrete road. The first recording medium was of course the ordinary glass photographic plate with its light-sensitive emulsion. It seems a far call from the

†The dye method was devised by Graham and Cole and described by them in a paper entitled, "Visualization of the Gallbladder by Sodium Tetrabromphenolphthalein," which appeared in the *Journal of the American Medical Association*, in 1924.

*The hot cathode is the invention of Dr. W. D. Coolidge, who announced it in the *American Journal of Roentgenology* of January, 1914, in the paper entitled, "A Powerful Roentgen Ray Tube with a Pure Electron Discharge." The radiator type of x-ray tube was first announced in a paper by Dr. Coolidge in the *American Journal of Roentgenology*, in June, 1919.

early plate to the highly sensitized, duplicated film of today with its double coated surface. The manufacturer of x-ray recording media has coöperated in the matter of x-ray diagnosis by the production of films capable of recording both density and contrast. Huge sums of money have been spent in the work of chemical experimentation, as a result of which we have films that satisfy the requirements as regards speed, quality and safety. The safety feature has been made possible in the use of a cellulose acetate, instead of a cellulose nitrate base, for the photo-sensitive emulsion.

The term *skiagraph*, now almost fallen into disuse, was once applied to an exposed and developed x-ray plate. The word is somewhat of a misnomer from its etymology *skia*, the Greek word for shadow, and *graphein*, to write. A shadow resembles a silhouette inasmuch as it presents a uniform surface showing an accurate outline depending upon the distance and angle of illumination. The justifiable use of the term *skiagraph* would include only those films made of some opaque medium such as barium sulphate or the various dyes used to bring the hollow viscera into relief. A radiograph on the other hand, shows variations in the record. In bones, for example, it is possible to show the bone architecture with as great detail as found on sectioning a dry specimen. This is less true, of course, regarding the soft structures.

During the past four decades, the age of the x-rays, there has accumulated a vast volume of literature on the subject not only in the domain of pure physics but in clinical radiography and radiotherapy as well. The x-rays have long ago filled their five-foot bookshelf. And the works on the subject measure up in quality with the written work of any other medical or surgical specialty. A notable feature in all x-ray literature is the fine quality of illustrations. Even the journals devoted to radiology are superior in the matter of both text and illustration. At each annual meeting of the National Associations the programs constitute in the main an appraisal of the year's progress in diagnosis and therapy.

Regarding roentgenology as a specialty, it might be said that it belongs to the category of general, rather than regional, in contradistinction to most specialties. It calls for all the knowledge and training that goes to make a well informed medical or surgical

consultant, and more. The roentgenologist should have a knowledge physics and even photographic processing, for, in spite of the fact that technicians may be hired, the roentgenologist should be a good technician and should understand thoroughly the special physics and chemistry underlying the technics of his specialty. There are so many pitfalls in the use of x-rays that it behooves the specialist to be "x-ray minded," which is hardly possible for one whose interests are spread over the field of medicine or surgery. Important especially is it that the matter of x-ray and radium therapy be administered by those qualified regarding the biological effects of the rays, precise dosage and the reaction of the lesion, whatever it is, to radiotherapy.

UNFAIR COMPETITION

(The Detroit Medical News)

Medicine is being practiced by unauthorized persons and groups. Dispensaries, insurance companies, industrial plants, and even the hospitals have had complaints registered against them for unauthorized practice. That these practices on the part of hospitals have been established by custom, are a matter of usage, and have never been challenged before, is hardly a justification for the unfair competition which hospitals seem to be giving those doctors who are working on their staffs, and especially those who are not on the staff. Regarding the former, the hospital holds the viewpoint that the prestige of being a member of a hospital staff and therefore having a right to use the hospital for paying patients and the professional opportunities and experience given by the hospital, constitute a very real return. We presume the balance of the syllogism must be: Therefore, take care of all staff cases assigned to your service, and ask no questions.

This modern day, however, is a period of inquiry. Individual physicians must look into their own affairs and weigh every penny of income and expense—mostly expense—or they find themselves and their families devoid of bread. To the individual practitioner, the loss of income, whatever the reason, is just as important as an unbalanced budget seems to be to the board of trustees of a hospital.

Something must be done about unauthorized practice of medicine. We sincerely hope that the Wayne County Medical Society's Committee on the Practice of Medicine by Corporations will be able to settle its problems amicably and without recourse to law. Other communities have built up codes which have been mutually fair and satisfactory to all concerned. We trust this can be done in Detroit. We note the good work of our confreres in the Detroit legal profession, and congratulate them.

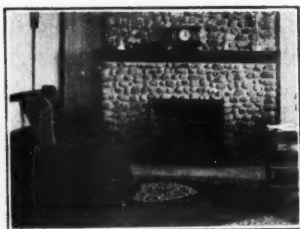
GEOGRAPHIC DIET

"Are you Hungary?" asked the waiter.

"Yes, Siam," replied the customer.

"Then I'll Russia to the table, and Fiji Turkey."

"Not necessary," retorted the customer. "Just Sweden my Java; Denmark my bill; I'm in a Wales of a hurry."—Anon.



The Editor's Easy Chair

LITERATURE

The manner in which this word is commonly used has a tendency to make one shudder. We speak of literature describing some proprietary medicine, or as catalogues describing in detail the various automobiles, or iceless refrigerators, or what have you. We receive volumes of "literature" in the way of blotters and leaflets; the former are usually retained until they become unsightly in our endeavors to remove surplus ink, and the latter invariably find their way to the waste basket, preferring as we do to have our advertising matter presented decently and artistically on the fore and aft pages of our medical and lay magazines.

* * *

Literature, Music and Art have constituted a triad that we like to think of as possessing a high degree of excellence with an emotional element that lifts us out of the humdrum of the daily routine. Each has an esthetic appeal. Literature in the true sense is more than the mere expression of thought; it is thought expressed in the most artistic way. One might take one of the masterpieces and paraphrase or abstract it in such way as to give expression to the author's thought and the resulting paraphrase would be anything but literature.

While an undergraduate, the writer attempted to study a voluminous work assigned as a text on the Practice of Medicine. The style was so cumbersome and monotonous that it amounted to boredom. This book was succeeded the following year by Osler's well known single volume on Practice, a book that was Osler's own work from cover to cover, when each successively revised edition was by himself. Result, reading was a pleasure. Osler was a master in the use of words. We have no recollection of that medical jargon that spoils otherwise valuable medical works. He possessed that altogether too rare faculty of making intensely interesting any subject on which he essayed to write, whether it were a work on

medicine, or medical history, or the interesting essays which have proved an inspiration to so many of his readers.

The editor confesses a weakness for scientific works, medical or other, written by English authors. Along with Osler might be mentioned Sir Clifford Allbutt, equally renowned for his contributions to medical literature, and here we use the word in its true sense. Sir Clifford Allbutt endeavored to teach English as well as medicine to his medical students; so important, in fact, did he consider clarity of expression, that he wrote a small book on the subject of Scientific English expressly for their benefit.

* * *

Speaking of a nice choice of words, Montague, one time editor of the Manchester Guardian, wrote: "A writer or a good reader will do much the same; his mind will finger single words and caress them, adoring the mellow fullness or granular hardness of their several sounds, the balance, undulation or trailing fall of their syllables, or the core of sunlike splendour in the broad, warm, central vowel of such a word as 'auroral.' Each word's evocative value or virtue, its individual power of touching springs in the mind and of initiating visions, becomes a treasure to revel in.

"Besides this hold on affection a word may well have about it the glamorous prestige of high adventures in great company. Think of all that the plain word 'dust' calls to mind. 'Then shall the dust return to the earth as it was.' 'Dust hath closed Helen's eye.' 'All follow this and come to dust.' 'The way to dusty death.' So, to the lover of words; each word may be not a precious stone only, but one that has shone on Solomon's temple or in Cleopatra's hair. Out of these illustrious atoms all the freakish pinnacles and cupolas of the world's wit were made, all the glow and intensity of its eloquence and the sweet poignancy of song. All things in literature are born of them; into them all things will die, but the words themselves will remain, and each word is like some small parcel of earth that was once Cæsar's brain and may yet make the brain of the next Christ that comes. Storied and ancient, it still has the freshness of youth; it lies, shiningly new, at the hand of every boy or girl who opens eager eyes upon life; it is as ready to enter into new melodies

now as the single notes that were marshalled by Bach."

* * *

Writers of the first rank have emphasized the value of a good working vocabulary. Words are to the author what fine tools are to the craftsman. If there is anything that makes Shakespeare the greatest poet in any language it is his versatility in the use of words, as one writer one time spoke of this wonderful faculty as "The word compelling power" of Shakespeare. The reader will readily recognize a number of the Shakespearean phrases quoted in the above paragraph.

Professor Weekly in a little book with a facetious title, "Cruelty to Words," emphasizes the importance also of sentence structure. Speaking of the fine literary craftsman, C. E. Montague, just quoted, he says, "he [Montague] had come to hate a bad sentence like a bad smell and to revel in a good one as he might in a rose." The great prose writer like the great poet, or musician, or artist, is born, not made. The ability to write clearly, logically, and grammatically, however, is within the power of everyone with normal intelligence who appreciates its importance and is willing to put forth the effort.

But we might go on indefinitely. However, let us not use the term "Literature" for anything but the best in prose and poetry. The term "prospectus" fills the role very satisfactorily for writing of the nature of propaganda proclaiming the merits of anything from automobiles to washing machines.

ENERGY CLAIMS FOR FOODS

The Committee on Foods reports that all foods except the simple mineral foods and water contain chemical energy available for use by the healthy body to support the many activities and life processes and incidentally to maintain temperature. This use of the term "energy" in defining the caloric energy value of foods should not be confused with the popular usage signifying the state of extreme well being, good health, vitality, strength, vigor or endurance. Food advertising should correctly inform the public of the energy values of foods in carefully chosen terms that may be properly interpreted. The distinction between the caloric and popular senses of the word "energy" must be recognized and observed. The terms "food value" or "nutritional value" should not be used synonymously with "food-energy value." The food or nutritional value of a food includes the vitamin, mineral, protein, fat, and other values. (Jour. A. M. A., November 10, 1934, p. 1452.)

C. T. EKELUND—SECRETARY-ELECT

An Autobiographical Sketch

On October 7, 1893, a circus train was wrecked in Saint Paul. For several hours tigers and elephants prowled the streets. That same afternoon I was born. The record showeth not whether I was born under the bed or in the closet, but I have had a wholesome respect for tigers and elephants ever since. I was very shy in my youth and notoriously afraid of girls. These two serious handicaps I have only recently begun to live down. Perhaps my wife and three daughters (no sons) have had something to do with it.

Up to the time I was twelve years old they called me a prodigy. I entered high school in the fall of my twelfth year. From then on they called me other and different things, but somehow, in due course of time, I got a B.S. and then an M.D. from the University of Minnesota. The M.D. was granted "in absentia"; at the time I was enjoying my favorite illness, sea-sickness, rocking in the bowels of a troop ship on the way to France. Parenthetically, I might remark that during my peregrinations I have been exposed to sea-sickness nine times and escaped only once. On that occasion I went to sleep in a boat moored quietly at Rotterdam and I awoke next morning in the mouth of the Thames, off Harwich.

To resume the chronology, I labored well, but perhaps not too wisely, in a Base Hospital in France until March, 1919, and followed that with a second rather amazing interlude of eighteen months with the American Red Cross Expedition to Poland. The memory of that period is now a rather confused nightmare out of which I can recall a diet consisting all too frequently of sardines and wild strawberries; the rest is a kaleidoscopic jumble made up of uniforms that clicked their heels, of refugees bloated with famine edema, of boyish soldiers, wretchedly clad in winter snows, of typhus fever and malaria, emergency surgery and more wounds of war and of cholera and of graves and crosses.

I recovered from this nightmare during a leisurely journey through Scandinavia, continued, after a sojourn in Paris, through Switzerland and Italy, and the interlude was concluded with the Christmas holidays back home with my family. I found an opportunity for graduate work waiting for me, too, and forthwith I became a Teaching Fellow in the Graduate School at Minnesota and Chief Resident in Medicine at the Minneapolis General Hospital. The year following I realized a cherished ambition to be Chief Resident in Surgery at the University Hospital and during these two years I recaptured a normal American medical point of view, forgetting much and learning more. Then came an opportunity which I grasped readily enough and which I have come to regard as one of the most fortunate choices I ever made. In Hibbing, Minnesota, the "Iron Ore Capital of the World," I spent the next three years, working with a group of sixteen doctors in contract practice. The level of practice in that group is exceptionally high, especially for contract practice, and I treasure greatly the experience gained and the friendships formed there. I would probably still be there were it not for the geographic remoteness of that city, albeit the social and cultural aspects of life there are as fine a flowering of American civilization as I have met anywhere, before or since. The chief reasons for seeking the further, greener pastures are probably best summarized by admitting that I have always been an individualist and coveted for myself a private practice and my own autonomy. With these motives my recently acquired wife and I started on a tour with a carefully planned itin-

erary, to find our future home. Our procedure was carefully thought out, we believed, and based upon sound criteria, and, to make a long story short, the journey ended in Michigan, in Pontiac. The criteria,



C. T. EKELUND, M.D.

Secretary of the Michigan State Medical Society, who will enter upon the active duties of office September 30, 1935.

and the statistical material of that journey will not be related here, but may be had upon request. I should have mentioned in passing that I was married in 1925 to the daughter of a man who, some years before, had signed my certificate of Medical Registration, as President of the Minnesota State Board of Medical Examiners, and I should hasten to add, also, that at the time I knew neither him nor his daughter. I have it on good authority, however, that the Old Gentleman looked up my grades before he gave his consent on that memorable day, when, with knocking knees and parched tongue, I awaited his pleasure in his office.

Dr. Dempster has insisted that I be not brief in this sketch, but he needn't have insisted so much; one's tongue can easily wag too much when talking about one's self. However, the remainder of my chronology is quickly told. During the first four years in Pontiac I prospered more than I had hoped; since then, along with most of my confrères, progress has been spelled with a different word, but still I cannot complain. There has been no dearth of patients or things to do for them. From the start I have found much pleasure in my professional associations and have worked with some zeal and a little satisfaction in the affairs of the County Society. Chairmanships of this committee and that and four times delegate to the Michigan State Medical Society has called for the expenditure of energy and effort, some of it misplaced, no doubt,

some otherwise. This year I am trying to make a good President activated by two simple principles: (a) that the prime function of organized medicine is the postgraduate education of its members, and (b) that in this day of social and economic change the "scientific method" with experimentation is not only justified but indicated, with organized medicine providing the leadership but with the closest understanding and coöperation of government and industry and social agencies.

I do not hold with those who see in a medical society an organization to which they must pay dues, but in the business of which they need never take part. I recognize full well that too often the deliberations of units of organized medicine are impotent and often ill-considered gestures, but if the history of organized medicine is ever written tersely, and with bold strokes, its true importance will stand revealed. If there is one point that I, as secretary-elect, may here be permitted to make, it is that the Society's business is eminently worthy and deserving of the first interest and serious thought of the ablest men in the profession and this I covet for organized medicine, to the end that the multiplying problems of the day may be solved with humanity and broad vision in keeping with the rich heritage of the profession.

EXPERIENCES WITH GONOCOCCUS FILTRATE (CORBUS-FERRY) AND OTHER FORMS OF INTRADERMAL THERAPY IN TREATMENT OF GONORRHEA

Gonococcus filtrate (Corbus-Ferry) intradermally is the only antigen of the several that Robert E. Cumming and Robert A. Burhans, Detroit, have used that seems to offer a specific aid in the treatment of gonorrheal infection and complications. No attempt has been made to explain the rationale of intradermal medication or to establish the part played by the skin in body immunity. They demonstrate that the filtrate can be used alone in the treatment of gonorrhea. It is their impression that gonococcus filtrate is most serviceable as an adjunct to mild local treatment. The filtrate is indicated in acute and chronic gonorrheal infections of men, women and children. It has been used freely in all types of complications and, in their opinion, has some virtue in amelioration, although other treatment, not so important in simple urethral involvement, is of prime necessity. The authors have not followed the recommendation of Corbus but have used the filtrate freely in all stages of the infection and complications. They have departed from the recommended dosage scheme by giving not more than 0.1 c.c. of filtrate (children should receive from 0.05 to 0.15 c.c. of filtrate), increasing weekly by from 0.05 to 0.2 c.c. (1/20-4/20), depending on the local skin, regional lymph gland, and systemic reactions as well as on the character of urethral discharge and the states of the infection. Complications are today, as they have always been, of greatest importance in gonorrhea; late and unexpected transmission of the disease, sterility in both sexes, and the determination of safety in marriage are questions peculiarly in the domain of the consulting urologist. The determination of cure in gonorrhea has always been a difficult problem. The authors believe that their use of gonococcus filtrate in large doses (from 0.1 c.c. to 0.4 c.c.) as a diagnostic or provocative agent to demonstrate dormant infection is a milestone in progress toward the ultimate cure of obstinate gonorrhea.—*Journal A. M. A.*, Jan. 19, 1935.

POSTGRADUATE EDUCATION

The following courses will be given during 1935 in Detroit:

Proctology	April 29, 30, May 1
Genito-urinary Diseases	May 2, 3 and 4
Gynecology, Obstetrics and Gynecological Pathology	May 6-10, inclusive
General Medicine	May 13-17, inclusive
Traumatic, Emergency and Minor Surgery	May 20-24, inclusive
Pediatrics	May 27, 28 and 29

The following courses will be given during 1935 in Ann Arbor:

Electrocardiography	April 1-6, inclusive
Ophthalmology and Otolaryngology	April 22-27, inclusive
Roentgenology	June 24-August 2
Diseases of Blood and Bloodforming Organs	From 2:00 to 4:30 p.m. each Thursday for eight weeks, beginning April 4
Surgery	From 3:00 to 5:00 p.m. each Thursday, for eight weeks, beginning March 28

The enthusiastic response to the teaching program given in Grand Rapids, Flint, and Battle Creek-Kalamazoo, jointly, in 1934, at which 796 doctors registered, warrants the continuation of this program, as well as an extension to other centers of the state. Accordingly, a postgraduate program will be conducted this autumn in:

Battle Creek-Kalamazoo, jointly
Grand Rapids
Flint
Bay City
Manistee, Cadillac, and Traverse City, jointly
Alpena, Petoskey, jointly

The arrangement of these programs is now practically completed and the outline of each will be available on application to The Department of Postgraduate Medicine, University Hospital, Ann Arbor, Michigan.

DEPARTMENT OF SOCIETY ACTIVITY

Edited by The Secretary

ATTENTION ALL SECRETARIES!

The annual Conference of County Secretaries will be held at the Union in Ann Arbor at 12:30 P. M. on March 27, 1935. The Faculty of the Medical School will put on a special diagnostic clinic at 9:00 A. M. Secretaries attending this meeting may bill the State Society for railroad fare or its equivalent and hotel bill where it is necessary to stay over night in order to attend the clinic. The program will be sent to each Secretary at a later date.

SPECIAL MEETING OF THE HOUSE OF DELEGATES OF THE AMERICAN MEDICAL ASSOCIATION

During January the news from Washington indicated that the program of the proposed changes in the social order was moving rapidly. It was evident, too, that in this program of proposed changes medicine would have a vital interest. In view of these unusual activities the Board of Trustees felt it necessary that a special meeting of the House of Delegates be called in order that there might be an expression of the views of the representatives of the one hundred thousand doctors making up the American Medical Association, and that these views be so correlated that the officers and trustees might act in accordance with the expressed sentiment. The official call noted that the meeting was called for a consideration of the Social-Economic policies of the Association as related to pending and proposed legislation and sickness insurance.

The President, in a message to Congress early in January, said:

"I am not at this time recommending the adoption of so-called Health Insurance, although groups representing the medical profession are cooperating with the Federal Government in a further study of the subject, and definite progress is being made."

This was followed shortly (January 17) by a preliminary report of the President's Committee on Economic Security, wherein was indicated the Committee's partiality to a system of compulsory health insurance.

This report stated that the Committee was awaiting a report from the Medical Advisory Group, expected by March first. The second and final meeting of this Advisory Group has already taken place. The question might well be asked: To what purpose did this Group act? Indeed, to what purpose could it act in the study of this complicated subject in two short meetings?

Next came the President's request for the four billion dollar Relief Fund with the provision that certain of these monies are to be used for health purposes. It is in the administration of these monies that we are especially interested.

In addition there came before Congress the Wagner bill. Also there came out a lot of propaganda promoted by an organization known as the American Association for Social Security furthering a so-called Epstein bill. This is a bill proposed for State Legislatures, and, as you will later note, is branded by the House of Delegates as a vicious bill.

These various activities in the opinion of the Board of Trustees demanded a united action by the representatives of the profession. So much for the occasion for the call.

It is not to be expected that one hundred and fifty men, delegates from the component Societies of the American Medical Association, would look alike on the various matters which were presented to them, and much discussion in the executive session ensued. It was recognized that the events of the last month constituted a direct challenge to the profession, and an attempt was made to answer this challenge in as satisfactory a way as possible with the limited amount of information on hand.

The House very definitely would maintain the ten principles as laid down at the Cleveland meeting. It would point out some of the vicious tendencies as expressed in some of the bills now under consideration. It would reaffirm some of the principles of the ethics of medical practice under which we have so satisfactorily worked in the past.

Please see your Secretary in regard to the payment of your dues.

It could not discuss some of the provisions which it might logically think would form a part of the Committee's report for these details were not at hand.

As discussion went on and the problem was attacked from many angles, various concrete opinions were developed and these referred to the Reference Committee. On this basis, the Reference Committee developed its report, which, modified at a later meeting, satisfactorily expresses the combined views of the delegates. This should serve as a guide to the profession of the country until such a time as developments demand a further consideration. It must be read by each member with great attentiveness.

Report of Reference Committee

With the special interest you have in the problem before us, it may be assumed that you have already carefully read the report of the Reference Committee. Perhaps it is advisable to call your attention to some of the salient paragraphs.

1. Your Reference Committee, believing that regimentation of the medical profession and lay control of medical practice will be fatal to medical progress and inevitably lower the quality of medical service now available to the American people, condemns unreservedly all propaganda, legislation or political manipulation leading to these ends.

2. The House of Delegates of the American Medical Association reaffirms its opposition to all forms of compulsory sickness insurance whether administered by the Federal Government, the governments of the individual states or by any individual industry, community or similar body. It reaffirms, also, its encouragement to local medical organizations to establish plans for the provision of adequate medical service for all of the people, adjusted to present economic conditions, by voluntary budgeting to meet the costs of illness.

3. The Committee on Economic Security, appointed by the President of the United States, presented in a preliminary report to Congress, on January 17, eleven principles which that Committee considered fundamental to a proposed plan of compulsory health insurance. The House of Delegates is glad to recognize that some of the fundamental considerations for an adequate, reliable and safe medical service established by the medical profession through years of experience in medical practice are found by the Committee to be essential to its own plans. However, so many inconsistencies and incompatibilities are apparent in the report of the President's Committee on Economic Security thus far presented that many more facts and details are necessary for a proper consideration.

4. The House deprecates any provision whereby federal subsidies for medical services are administered and controlled by a lay bureau. It recognizes the desirability of adequate medical service for crippled children and for the preservation of child and maternal health, but protests those sections of the Wagner Bill which place in the Department of Labor the responsibility for the administration of

funds for these purposes. It condemns as pernicious that section of the Wagner Bill which creates a social insurance board without specification of the character of its personnel, to administer functions essentially medical in character and demanding technical knowledge not available to those without medical training. It condemns the so-called Epstein Bill as a vicious, dangerous and demoralizing measure which introduces such hazardous principles as multiple taxation, inordinate costs and extravagant administration.

5. The House of Delegates reiterates the fact that there is no model plan which is a cure-all for the social ills any more than there is a panacea for the physical ills that affect mankind, and calls attention to the many plans for medical service undergoing study and trial in various communities. The Bureau of Medical Economics has studied these plans and is now ready to advise medical societies in the creation and operation of such plans.

You are referred to the *Journal of the American Medical Association* for the complete report.

A SOLDIER IN SCIENCE

"The sort of physician who will dominate the future is the one who never thinks he has done his duty, or even that he has accomplished anything worth while, until he has shown the victim how it was that he got sick, why it was that he got well, and how he can probably keep well."

He who wrote this died just a few weeks ago. He found a whole people ill for the lack of knowledge of a few facts. For these people he found the facts, and to the sick man of the Tropics he brought this knowledge. More than this he interested this sick man in his own salvation.

In Puerto Rico the man and the opportunity met as unexpectedly as at Michillimackinac another soldier-doctor met and matched his opportunities.

Bailey K. Ashford, a young medical officer, was a part of the invading brigade sent to Puerto Rico during the Spanish-American war. A violent devastating hurricane sent the pallid, weak, emaciated natives down from the mountains to seek food and shelter. The more seriously ill found refuge in the army hospital. His interest was stirred. He wanted to do something about it and he did, and in the doing he became internationally famous.

He was the first to find hook worm on American territory. He made the first mass attack against it and with this mass attack he set the pattern for mass attacks on this and similar infections for the world. No doctor of our time has to his immediate credit so many cured patients. By treatment, directly under his supervision, these

patients are to be counted in the thousands. The accomplishments in science which brought him international fame were not, however, limited to this work on hook worm. Cuba knew him and was grateful to him for his work in that country on malaria. Brazil knew him and was grateful to him for his work there on sleeping sickness (trypanosomiasis). The scientific world knew him first for his work on hook worm and then for his work on filariasis, and honors him especially for his work on the pathogenic yeasts and the resultant discovery of the probable cause of that strange disease, Tropical Sprue, the pernicious anemia of the tropics. His own government has given him the Distinguished Service Medal and England and Egypt have officially honored him. He was Editor in Chief of the Medical History of the World War. At his death he was professor of tropical medicine and mycology, in the School of Tropical Medicine inspired by him and built under his direction by Columbia University, on that island for whose people he opened a new world of health and hope.

Colonel Ashford tells the story of the Conquest of Puerto Rico for Science, in his book, "A Soldier in Science," published but a few weeks before he died. With a background of long experience and with the record of unusual accomplishment behind him, the closing paragraph of his book has an unusual significance.

"The doctor's mission from this time forward, as I see it, is not so much a question of relief of pain, of prevention of death, as it is a question of salvaging this man, this woman, this child, for one hundred per cent efficiency in the future."

I commend this book to you. It is an interesting and inspiring report of one of the most outstanding accomplishments of man through Science in our generation. Incidentally, if you were "Over There," you will get an extra bit of enjoyment as you live again, with him, some of your own experiences in the A. E. F.

MR. MILBANK LOOKS AT THE PROBLEM

The garment of rugged individualism seems to fit the doctor even as snugly as it fitted the so-called Captains of Industry, now somewhat in disrepute. With centuries of tradition behind us, we, as a profession, protest change as vehemently as does the Church. At heart we are so self-contained

and super-loyal that any pressure brought from the outside looking toward a change is almost certain to be resented. Yet it may be that on further study of the subject of Medical Social Economics, we will be disposed to loosen the garment by our own efforts. It may be advisable that we break with some of the less essential of our traditions.

At any rate the problem before us must be studied intelligently with as few prejudices and as complete an understanding of the problem as is possible. This, of course, will include the views of those whom we have looked upon as advocates of a change in the pattern of medical practice. There is an opinion prevalent quite generally among the profession that dominant among the forces advocating such change in practice are the various foundations. To the Indiana State Medical Association* we are indebted for this opportunity of placing before you the views of the president of one of the most prominent of these foundations. On invitation of the Society, Mr. Albert G. Milbank, president of the Fund which bears his name, appeared before the Conference of County Secretaries on January 27. Mr. Milbank spoke of the misunderstandings which have arisen and assumed regrettable proportions between the philanthropic foundations and the profession, and made a strong plea for coöperation between these foundations and organized medicine in an effort to solve the problem of payment for medical care. He summarizes the nature of the complaints which have been made against the Milbank Fund, most of which are familiar to you, and entered a vigorous denial that these charges have in fact any substantial foundation. Commenting on the inspiration which gave rise to the Fund and the tradition behind it, he said:

"It would be quite out of character if our Fund should seek to undermine those foundations of the practice of medicine which have been built up, tested and found good over the years, and to discredit the front line troops upon which everyone must rely to win the common fight for better health for the people of the United States."

Continuing he said:

"The world is in a turmoil of conflicting philosophies. . . . Today there is being waged a Titanic struggle between conflicting schools of thought, Socialism and Individualism. In their wide ramifications and implications they affect the daily lives, habits and welfare of the average person. . . . The

*The full text of Mr. Milbank's address is published as a supplement to the *Journal of the Indiana State Medical Association* for February, 1935.

Please pay your dues.

World War conscripted the youth of the country who were physically and mentally fit. This ideological war conscripts each and every one of us, old and young, rich and poor, strong and weak. No individual and no group can claim exemption."

"I submit that the problem of medical economics and its solution represents only one phase of a larger and more general economic, social and political controversy. That phase, dealing as it does with the subject of the health of the nation, is naturally of special interest and concern to the members of the medical profession. But it is well to keep in mind that you have not been singled out as an isolated group charged with a failure to measure up to your collective responsibilities. On the contrary, as individuals, you have set a standard of service which entitles you to high honors. To the extent to which, however, you are asked, collectively, to consider ways and means of promoting the health of the nation you are in precisely the same position as is every other professional group and every business enterprise upon which pressure is being brought to bear, in one way or another, to conduct their private affairs in a manner that will promote the public interest.

"Let us look at the proposals which have been submitted by the Fund's Staff in so far as they affect the medical profession. In so doing I will give my own understanding of these proposals and the reasons why they have seemed to me worthy of serious consideration.

"First: The proposals do not constitute a health insurance plan worked out in all of its administrative and financial details. Rather they are a series of principles on which any plan, if, as and when developed, should be based. You must have already noted the striking similarity between these principles advocated by members of our Staff and the principles recently adopted by the American Medical Association, the American Dental Association, and other professional groups.

"Second: The principles advocated by the Staff and by organized medicine place marked emphasis on maintaining a continuing personal relationship between the doctor and his patient and, therefore, on this all-important point the proposals are calculated to maintain the status quo.

"The administrative and financial aspects of the plan are quite as important as are the underlying principles. At best mistakes will be made. Some unanticipated evils will creep in. Human nature will continue to be human nature. But the answer to all this is that the ultimate goal is worth some risks if they are not too serious. Furthermore, potential new evils must be weighed not against Utopia but against existing conditions. Your leaders have voiced the general dissatisfaction with the inadequacy of the present methods of paying for medical care and with the quality of some of the medical care as given in free clinics. The advantages, both to those in need of medical care and to those who are equipped to meet that need, have seemed to me to outweigh the disadvantages *provided*—and this, I believe, goes to the very heart of the problem—provided, the doctors themselves become wholeheartedly determined to make the plan a success.

"Personally, I would have little faith in seeing achieved the full results hoped for without the cordial coöperation of the practicing physicians. Laws are not self-enforcing. To become effective they must have the support of public opinion—in this case medical opinion. Plans on paper are sterile unless vitalized by human energy. While it would be too much to expect unanimity in your profession I would hope that the predominating opinion may crystallize in favor of some plan for mutualizing

the costs of medical care that would meet the needs of that vast group of our people who are neither well-to-do nor wholly destitute and who cannot, as individuals, budget their medical costs but who as members of a group can do so, and would also make provision on a more satisfactory basis than at present for the medical care of the indigent sick."

"Third: There is no disagreement, so far as I am aware, on such other important points as, (1) Freedom of all competent practitioners who subscribe to necessary rules of procedure to engage in insurance practice; (2) Freedom of all persons to choose their physician or dentist from among all practitioners in the community who engage in insurance practice; (3) Freedom of insurance practitioners to accept or reject patients; (4) No interference by the insurance system with the private purchase of medical service by those persons who can afford it; (5) Separation of cash benefits from medical benefits; and (6) Professional control of professional personnel and procedures.

"With this brief summary of the proposals of the staff it must be clear that, instead of being conceived in a spirit of hostility to the medical profession, they are designedly intended to be positively and affirmatively helpful to the medical profession."

In commenting upon the possibility of health insurance coming as a result of state or federal legislation embodying the above principles, Mr. Milbank does not ignore the dangers that will have to be studied, appraised and guarded against. He said:

"There must be an avoidance of the evils of bureaucracy. There must be a freedom from political influence. There must be no repetition of the defects disclosed in the administration of the workmen's compensation laws. The spirit of self-reliance and self-respect among the insured group must be maintained. Malingering must be strictly dealt with and minimized. The risks of racketeering and chiseling should not be overlooked. All these are possible dangers than can only be appraised when a plan in all of its administrative and financial details has been worked out and submitted for critical study and analysis. But you should not wait until a plan has been completely worked out. If you do, you may be making the same mistake which I am told by my medical friends was made by the profession in respect to the workmen's compensation laws; you will be permitting others than the members of your profession to lay down the rules of the game. You will recall that the compensation laws were at first cash-benefit systems to which medical care was later tacked on. It has been difficult, I understand, to eliminate this fundamental weakness of the laws and to improve their medical provisions."

LEGISLATIVE LOBBYING

Speaking in Minnesota during December, Dr. Morris Fishbein, editor of the *Journal of the American Medical Association*, declared that proper representation of the physician in medicine and Congress should come from the states themselves and not from a lobby of the American Medical Association at Washington.

"Personally, I have always fought the idea of a so-called 'lobby' for the American Medical Association in Washington," declared Dr. Fishbein. "Lobbyists are in disrepute. They are defined as persons who attempt to wield undue influence and as such are undesirable. The American Medical Association cannot afford to indulge in that sort of thing.

"On the other hand, we do know what is going

on and we are represented at every hearing on bills that are of interest to the medical profession.

"When influence is to be brought to bear it should come from the states themselves, not from the American Medical Association. In comparison with you men in the congressman's district the American Medical Association carries not a particle of influence with Congress.

"The American Medical Association should be known for the great welfare institution that it is, not a lobby for 'medical trust.'"

From *The Wisconsin Medical Journal*, Feb., 1935.

MINUTES OF SPECIAL MEETING, EXECUTIVE COMMITTEE OF THE COUNCIL

The Executive Committee of the Council of the Michigan State Medical Society met in special session January 27 at 1:00 P. M. at the Olds Hotel, Lansing.

The meeting was called to order by the chairman. There were present, Chairman Julius Powers, T. F. Heavenrich, Henry Carstens, H. A. Luce, J. E. McIntyre, President Richard Smith and President-Elect Grover C. Penberthy.

The Secretary reported that there had been many complaints from rural districts in many parts of the state and particularly from Eaton, Grand Traverse-Leelanau and Marquette-Alger Counties in reference to the inadequacy of the FERA fees and particularly in reference to the recent cut in mileage. In addition, certain specific complaints concerning the failure of County Administrators to O. K. what apparently were legitimate bills. In view of these complaints and by instruction of the Council, the Secretary requested a meeting with the State Committee of the FERA.

Mr. William Haber, State Relief Administrator, has arranged a meeting for 10:00 o'clock on Tuesday morning, January 29. A request was made by the Secretary for the appointment of a Committee to meet with the State Committee. The Executive Committee directed that the following committee be appointed:

President Richard R. Smith, Chairman Julius Powers, Secretary Burton R. Corbus, Dr. E. F. Sladek of Traverse City and A. G. Sheets of Eaton Rapids.

Doctor Luce requested instructions for the delegates who are to attend the Special Meeting of the House of Delegates of the American Medical Association, called for February 15 at Chicago, for the consideration of the social and economic policies of the Association as relating to pending and proposed legislation. On motion of Carstens, seconded by McIntyre, the Executive Committee directed the delegates to use their own judgment. The Secretary and the President-Elect were directed to attend the House of Delegates meeting in Chicago.

Legislative Committee

At the January meeting of the Council, the Executive Committee was directed to call a joint meeting of the Legislative Committee so that the Legislative Committee might receive the action of the Council in regard to legislative policies and to discuss with them further legislative activities.

This order of business was now before the Committee and the Legislative Committee was asked to join the Executive Committee. Present of the Legislative Committee were Doctors Bradley, Chairman, Christian, Garipey and Hyland. With them came Doctors Sheets, Carr, Crum, McNamara, McAllister, Andrews, Greene, O'Meara, Councilor Perry and Ex-Presidents Moll and Robb. These men were, on motion, given the privilege of the floor.

Doctor Bradley reported on bills now before or which it is proposed to present to the legislature. Doctor Christian read a statement in regard to legislative policies past and present. A prolonged discussion ensued largely in reference to the employment of a professional lobbyist. It was pointed out by the Chairman that the Executive Committee was not in a position to alter in any way the action of the Council. That the Executive Committee's duty was to present these actions to the Legislative Committee and request the individual members of this Committee to state that they would be willing to abide by these instructions.

It was moved by Doctor Luce, that "The Council employ a lay secretary to act as an assistant to the medical secretary, provided that a proper man for the place could be found and that the salary could be satisfactorily adjusted to our finances." Moved by Luce, seconded by Carstens and carried. Following this it was moved, seconded and carried that the Chairman appoint a committee to consider the qualifications of candidates and such other matters as might properly come under the preceding motion. Chairman Powers appointed the following Committee: President-Elect Penberthy, Chairman; Councilors Henry Carstens, Paul Urmston, Thomas P. Treynor and Frederick A. Baker.

The meeting adjourned at 6:00 P. M.

(Signed) BURTON R. CORBUS, *Secretary*.

COUNTY SOCIETIES

CLINTON COUNTY

At a recent annual meeting of the Clinton County Medical Society held at the Clinton Memorial Hospital the following officers were elected for the ensuing year:

President, Dr. D. H. MacPherson, Fowler, Michigan; Vice President, Dr. F. D. Richards, DeWitt, Michigan; Secretary-Treasurer, Dr. T. Y. Ho, M.D., St. Johns, Michigan (re-elected); Delegate to State Convention, Dr. Dean Hart, St. Johns, Michigan; Alternate, Dr. F. D. Richards, DeWitt, Michigan.

Following election of officers a brief outline of the Society's activities for the coming year was mapped out by Dr. MacPherson, the incoming president of the Society, which met with enthusiastic approval of all members.

DICKINSON-IRON COUNTY

On January 10, 1935, the Dickinson-Iron County Society met and elected the following officers for 1935: president, Dr. A. L. Haight, Crystal Falls; vice president, Dr. D. R. Smith, Iron Mountain; secretary, Dr. C. P. Drury, Iron Mountain. At this meeting plans were started for the annual meeting of the Upper Peninsula Medical Society at Iron Mountain next August. It was hoped that a special post-graduate conference might be used as the program for the annual meeting.

On February 10 the Dickinson-Iron County Society met for its second meeting of the year at the Milliman Hotel, Iron Mountain, Mich. After a short business meeting the society adjourned to enjoy the following program:

Dr. M. B. Beckett—"The Use of the Biologics furnished by the State Department of Health."

Dr. George Boyce—"The Development of the Sinuses."

Dr. W. H. Huron—"Female Sex Hormone Therapy."

CHARLES P. DRURY, *Secretary*.

EATON COUNTY

Thirty-three members and guests of the Eaton County Medical Society were present at the first regular meeting of the Society for the year. Dinner was served at the Carnes Tavern Hotel, Charlotte, Mich., at 6:30 p. m.

The president, Dr. Don Hargrave of Eaton Rapids, presided. Following introduction of guests from the Battle Creek Academy of Medicine, Barry County and the Ingham County Medical Societies, the meeting was turned over to the scientific program of the evening.

Dr. Carl Badgley, Professor of Orthopedic Surgery, University Hospital, Ann Arbor, gave a very beautiful and instructive address on "Posture (or Body Mechanics) and Flat Foot." According to Dr. Badgley there are three main body types so far as body is concerned. There is the normal type which the physician seldom sees, the thin type or Uncle Sam type and the thick or John Bull type. The thin type has a short intestine while the thick type has a long intestine. The thick type has a large liver; the thin type a small liver. The thin type a high basal metabolic rate and low blood pressure while the thick type has a low basal metabolic rate and a high blood pressure.

Due to the competition in athletics of today the athlete must have a proper posture. Dr. Badgley refers to Goldthwait as the outstanding authority on body mechanics. Goldthwait emphasizes the importance of the diaphragm to correct posture. Gravity plus normal muscle tone produces the normal posture. Posture begins with the erect stature. It begins in childhood. The child of one year has normally bowed legs; at two years he is knock-kneed and at four this disappears. As the child approaches four years the abdomen begins to become pendulous and a lordosis appears, but there is no thoracic curve as yet. A study at an older period revealed that at Harvard University 80 per cent of the entering men showed postural defects; 50 per cent at Yale showed scoliosis.

A normal posture is one in which a straight line will pass through the mastoid process, acromion process, greater trochanter, and external malleolus. This line should be ten degrees forward from the vertical according to Badgley. The chin is back, not up, the chest is up and the abdomen is flat, the gluteal muscles are in contraction.

Treatment of abnormal posture includes deep breathing exercises. Lying down and exercising the legs as if walking, standing against the wall and using the legs as if walking, lying on the back and putting a support under the dorsum with deep breathing exercises and contraction of the abdominal and gluteal muscles. The doctor next gave a discussion of flat feet.

A short business meeting with the Eaton County Emergency Relief Commission was held. A new program for schedule of fees was read by Mr. H. Marr Byington. The details causing dissatisfaction of the physicians were ironed out very nicely. The motion was made by Dr. C. D. Huber and supported by Dr. Bradley that the schedule as outlined be accepted. This was unanimously passed by the Society.

JOHN LAWTHER, *Secretary*.

Officers for 1935:

President—Dr. D. V. Hargrave, Eaton Rapids, Michigan.

Vice President—Dr. H. A. Moyer, Charlotte, Michigan.

Secretary and Treasurer—Dr. John Lawther, Charlotte, Michigan.

HOUGHTON COUNTY

At the January meeting of the Houghton County Medical Society the election of officers resulted in the choice of the following: president, Dr. G. C. Stewart, Hancock; vice president, Dr. T. P. Wickliffe, Calumet, and secretary, Dr. W. T. S. Gregg of Calumet. At the meeting held February 1 at Houghton, the president's address on "Medical Insurance" was given by Dr. G. C. Stewart. An address on "Biologics—Their Preparation and Use," was presented by Dr. Beckett of the State Board of Health. A case of comminuted fracture of the tibia of an epileptic treated by the use of a Parham band, with illustrative x-ray films, was discussed by Dr. T. P. Wickliffe.

W. T. S. GREGG, *Secretary*.

MONROE COUNTY

Monroe County Medical Society has had a series of interesting meetings this season.

On November 15, 1934, Dr. Chester A. Doty, of Detroit, gave a talk on "Skin Cancer." His highly informative and well arranged discussion was illustrated by excellent photographs.

On December 20, Dr. Thomas L. Ramsey, director of the pathologic laboratory at St. Vincent's Hospital, Toledo, gave an excellent presentation of the subject, "Vaccine Therapy."

On January 17, 1935, Dr. A. W. Newitt, epidemiologist of the State Department of Health, spoke on "The Biologic Products Furnished by the State." All the members appreciated the comprehensiveness of this talk and the opportunity to hear the very latest in technic.

FLORENCE AMES, *Secretary*.

MUSKEGON COUNTY

The annual meeting of the Muskegon County Medical Society was held December 14, 1934, at the Muskegon County Sanatorium, where the society was given a complimentary dinner by Dr. Herbert Bartlett, Superintendent.

The officers elected for the ensuing year were: Dr. Harold Closz, president; Dr. C. M. Colignon, president-elect; Dr. Charles A. Teifer, secretary-treasurer; Dr. Roy Holmes, delegate; Dr. Frank Garber, Sr., alternate; Dr. George L. LeFevre, medico-legal advisor.

Dr. Max Stone, City Health Officer, reported that instead of various units taking care of the sick adults, the County will take care of these patients for a set fee. He gave the fee schedule, which covered major surgical patients, minor surgical patients and medical patients. This arrangement will be effective after January, 1935. This does not include contagious diseases, and their care. The superintendent of poor must approve all patients treated under this plan.

Dr. F. M. Boonstra and Robert Risk, Jr., were elected to membership in the society.

The retiring secretary, Dr. Frank Garber, Jr., gave his annual report, which was accepted by the society.

A communication from the State Commissioner of Health, Dr. Slemmons, was read. Dr. Slemmons offered the services of one of the members of his staff, to give a talk on "Indications, Limitations, and Technique of Administration of Biologics," which are distributed by the State Board of Health.

CHARLES A. TEIFER, *Secretary-Treasurer*.

Have you paid your 1935 dues?

ST. CLAIR COUNTY

A regular meeting of Saint Clair County Medical Society was held Tuesday, February 5, 1935, at the Harrington Hotel, Port Huron, Michigan.

Supper was served to about twenty-five members and guests, after which the meeting was called to order by President Waters with twenty-seven members and three guests present. The meeting was called to order and the secretary read the minutes of the preceding meeting, which were approved as read. President Waters spoke of committee appointments and urged the members thereof to do the work expected of their committee. He then spoke of changes in the welfare arrangements. The secretary read the monthly letter from the State Society. Dr. Heavenrich, Councillor of the Seventh District, spoke briefly with regard to the September meeting at the Soo, of welfare work, of lobbyist at Lansing, of the new bill for medical registration and the proposed change in the afflicted child act. The secretary read a letter from the executive secretary of Wayne County Society and a letter from Dr. W. W. Ryerson, who is now a resident at San Antonio, Texas, because of poor health. The president introduced Dr. Heavenrich, who read a paper upon the subject, "Skin in Industry." The subject was well presented by one who has for many years been identified with industrial medical work. A thorough and interesting discussion followed, after which Dr. Heavenrich closed in the usual manner.

The president announced that Dr. Hugo Freund would address the Society on "Pneumonia" at the next meeting. He thanked Dr. Heavenrich for consenting to present a paper in the absence of Dr. Freund, who was to have been at this meeting.

GEORGE M. KESL, *Secretary-Treasurer.*

WOMAN'S AUXILIARY

MRS. F. T. ANDREWS, *President, Kalamazoo.*
MRS. F. M. DOYLE, *Secretary, Kalamazoo.*

The January, 1935, *News Letter*, edited by Mrs. Robert Fitzgerald, Press and Publicity Chairman of the Woman's Auxiliary to the American Medical Association, is most interesting and instructive. It contains a letter from Mrs. Robert Tomlinson, President of the Woman's Auxiliary to the American Medical Association, telling of her trip to Atlantic City, where plans were made for the national convention, which will be held there in June.

The Traymore Hotel, on the Board Walk, and not far from the huge Convention Hall where all the men's meetings, the scientific and commercial exhibits will be held, will be the Auxiliary headquarters.

Those who have never attended a National Auxiliary Convention will not want to miss this one. Quoting Mrs. Tomlinson:

"Dr. Carrington (Convention Chairman) and I went over many things and I am sure you will appreciate that our hope is to make the most of the many attractions that are Atlantic City's alone.

The piers, the Board Walk, the sea food, the sun and sea air combined with splendid hotels and a spirit of welcome that is unsurpassed, our Canadian visitors and our own pleasure at renewing old friendships will provide us with an opportunity to accomplish much, to play hard and to go home refreshed by our stay in our country's greatest seashore resort."

The *News Letter* also gives accounts of the activities of the various groups throughout the country.

The Auxiliary to the Nebraska State Medical Association has organized a bureau which arranges for physicians to address lay organizations. In Florida (Dade County), the Auxiliary has established a fund to aid widows and children of physicians. The Michigan State Auxiliary has made a special effort to be informed on legislation affecting the medical profession and to be prepared to discuss it before other organizations. The Georgia Auxiliary participated in welfare projects, such as preparation and dissemination of information on maternal welfare, cancer and tuberculosis. The Illinois Auxiliary urges attention to medical legislation. Presiding officers of nearly one hundred clubs attended a "public relations day" held by the St. Louis Medical Society Auxiliary; Dr. Joseph F. Bredeck, city health commissioner, made an address on "Public Health Nursing Needs." The Texas Auxiliaries are planning to assist the Mexican schools. The group at Walla Walla, Washington, is continuing sponsorship of a series of health broadcasts begun last year.

The Denver Company Medical Auxiliary held a benefit bridge and fashion show; approximately 800 tickets were sold; and accordingly a substantial contribution was made to the Medical Student Educational Fund. In the District of Columbia, the activities were chiefly devoted to social service projects, assisting the Red Cross, the Associated Charities and Emergency Hospital. The Racine County (Wisconsin) Auxiliary has been visiting the various county and city institutions with a view to interesting the members in these institutions. In Oregon the Auxiliary to the State Society is credited with a large share in the defeat of the healing arts amendment to the state constitution which would have nullified the basic science law. In a campaign that reached schools and women's organizations, the objective was dissemination of educational material concerning the issues involved.

Books recommended by the Iowa State Auxiliary pertaining to the medical profession, which would be suitable for study by auxiliary groups or for review before local lay organizations are: *Yellow Jacket*, life of Walter Reed; *Vitality*, by Boris Sokoloff, M.D.; *The Case for Sterilization*, by Leon F. Whitney; *How the Mind Works*, by Cyril Burt, Ernest Jones, Emmanuel Miller and William Moodie; *Life of Sir Robert Jones*, by Frederick Watson, and of special interest to all orthopedic physicians; *The Great Doctors*, by Dr. H. E. Sigerist; *The Little Doctor*, by F. G. Layton, a novel depicting the life of a panel doctor in the poorest districts of an English manufacturing town; *What We Are and Why*, by Lawrence H. Mayer, M.D.; *More Power to You*, by Walter B. Pitkin; *Persons One and Three*, by Shepherd Irving Franz, a study in multiple personalities. These books are either written by doctors or are about them.

Every Auxiliary member is urged to read the *Bulletin*, her state periodical, and *Hygeia*. A real acquaintance with *Hygeia*

will enable us to recommend it more sincerely than ever to our friends.

Members of the Auxiliary who are interested in P. T. A. Summer Round-up work, please contact your local or State Public Relations Chairman for recommendations from the National Public Relations Committee.

MRS. LLOYD C. HARVIE,
State Press Chairman.

Bay County

The Woman's Auxiliary to the Bay County Medical Society held its first meeting of the new year on Wednesday, January 30, 1935. Twenty members met at the Duchess Tea Room for dinner at 6:30 o'clock. After a short business session, Mr. Louis Harrison, city chemist, gave a talk on water conditions in the Saginaw Valley, and Miss Marian Moore read articles from the State Medical Journal.

(MRS. E. C.) JOSEPHINE S. MILLER.

Jackson County

The January meeting of the Jackson County Auxiliary was held at the home of Mrs. J. H. Myers, 135 Grovedale Ave., on Tuesday, January 15. Dinner was served to thirty members of the Auxiliary. Mrs. Ennis Corley was chairman of arrangements assisted by Mrs. Horatio A. Brown, Mrs. Earl Thayer, Mrs. Randall Cooley, Mrs. L. J. Harris and Mrs. Don Kudner. Mrs. M. N. Stewart, vice president, presided at the business session. Reports were given from the various committees and correspondence was read from the Wayne County Society and the State President. The State President urged all members to read the JOURNAL.

Dr. Philip Riley, a local physician, gave a very interesting and enlightening talk on "Medical Education." Dr. Riley is a member of the State Legislative Committee.

The February meeting was announced as being a "Young Artists Recital."

(MRS. FRANK) PAULINE VAN SCHOICK.

Kalamazoo County

Christmas gifts, beautifully wrapped, were presented to thirty-five old people and shut-ins by the Kalamazoo County Auxiliary.

Miniature evergreen trees were placed on each tray for all patients in our two hospitals, Bronson and Borgess, on Christmas Day.

A complete layette, including a lovely mattress and pad, was made by our Auxiliary and presented to a needy prospective mother.

Thirty-three members of the Kalamazoo Auxiliary enjoyed a delightful co-operative supper on January 15, at the home of Mrs. Rush McNair. A social hour followed a short business meeting.

(MRS. C. B.) CORA FULKERSON.

Wayne County

The Woman's Auxiliary to the Wayne County Medical Society held its regular monthly meeting in the Grand Ballroom of the Book Cadillac Hotel, January 11, 1935, at 2 P. M. Preceding the meeting there was a luncheon in honor of the speaker of the day, Dr. Thurman B. Rice of the Indiana State Medical Association, Indianapolis. His lecture was most entertaining and unusual. He asserted that people, generally, give so much attention to the details of living that little time and strength are left to enjoy the real fullness of life. "Live simply and sensibly," Dr. Rice advised, "with less apprehension as to the span of one's years."

At the business meeting following the lecture, Mrs. Edward G. Minor reported that the Public Relations Committee, of which she is chairman, had printed and mailed to federated clubs in the county 235 letters inviting the general public to attend the series of three lectures which her committee is sponsoring.

Mrs. H. Wellington Yates, chairman of the Legislative Committee, read an article from the *American Medical Association Journal* emphasizing the need for immediate action on the health insurance problem.

Mrs. Claire L. Straith, chairman of the Membership Committee, outlined a drive for membership and reported three new members.

On January 26, Mrs. John A. Freese and her Ways and Means Committee arranged a thoroughly delightful social evening at the home of the Wayne County Medical Society. An Oriental supper was served from six to seven, its excellence putting everyone in a happy frame of mind for the splendid program of the evening. After music by Mr. Ernest Minchilla, an accordion artist, moving pictures of the members taken last June at Greenfield Village and Dearborn Inn were exhibited.

A one act play "Their Anniversary" was skillfully presented by the Paul Hickey Players under the direction of Treasa Way Merrill. Those taking part in the play were Mrs. Harold F. Sawyer, Mrs. H. G. Nauss, Mr. Cecil Matthews, Mr. Melville Hawk and Mrs. George E. McCreedy. Daughters of members, in costume, assisted as hostesses.

The February meeting of the auxiliary was held on the eighth in the Crystal Ballroom of the Book Cadillac Hotel. Preceding the meeting, Dr. F. L. Rector, speaker of the day, was honored by a luncheon to which the auxiliary members and council of the Wayne County Medical Society were invited. Dr. Rector is field representative of the American Society for the Control of Cancer. His lecture was illustrated with slides and indicated the need for education of the general public in this particular branch of medicine. Dr. Rector stated that cancer has so increased in the last ten years that it now ranks second in the mortality rate of diseases.

Mrs. Straith presented the names of four new members—and plans were discussed for the next two meetings—A Valentine Tea on February 14 and a lecture by Dr. Morris Fishbein, editor of the *American Medical Association Journal* on March 8, at 2 P. M. in the Crystal Ball Room of the Book-Cadillac Hotel.

Mrs. Clifford B. Loranger and her committee have done splendid work with both the magazine *Hygeia* and the book for children "Healthy Land." They report fifty-two sales of the latter and six new subscriptions for *Hygeia*. At each of the lectures arranged by the Public Relations Committee, an interesting exhibit has been on display. A *Hygeia* booth was arranged in connection with the Child Health Institute held in January.

(MRS. FRED'K T.) FLOY T. MUNSON.

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, M.D., Dr.P.H., Commissioner
LANSING, MICHIGAN

Nutritional Project in Operation

To aid in checking an increase in scurvy and other dietary deficiency diseases among infants and young children, and to assist in making necessary medical care available for needy prospective mothers, a special nutrition project was undertaken by the State Emergency Welfare Relief Commission with the coöperation of the Children's Fund of Michigan and the Michigan Department of Health. Work was started on January 14, 1935, to continue for a period of six months. A public health nurse was added to the staff of the Commission to have general supervision of the project, to be aided by the nursing directors of the Children's Fund and the State Health Department.

The work was begun at the suggestion of Dr. Thomas Cooley of Detroit, President of the American Academy of Pediatrics. Dr. Cooley called the attention of the State Health Department to the increase in scurvy among infants in Detroit, and asked whether something could be done. A conference between representatives of the Department, officials of the Children's Fund and Dr. Cooley brought out the fact that field workers of the two organizations had reported a need among prospective mothers and young children of more adequate diets and of medical supervision. As a result of this conference, a plan was worked out and submitted by Dr. Slemons to the State Relief Administrator with the request that funds be allotted to carry it out. This request was granted.

A survey of counties showed that in thirty-five the public health nursing service was inadequate to carry on the intensive work necessary. Nurses were therefore assigned to these counties, a total of forty nurses to the thirty-six counties, including two supervisors.

The plan of work is based on home calls on families on relief or near the borderline in which there are prospective mothers or young children. The prospective mother is given suggestions on how to spend the available food money to the best advantage. The nurse also acquaints the mother with the local channels for securing necessary medical care, and works with the physician in home supervision of his cases. By advising and helping in the preparation for home delivery, the nurse is often able to save the expense of hospital delivery.

In families with infants, especial attention is paid to dietary supervision to guard against scurvy and rickets. The need for orange juice, lemon juice, or tomato juice and the value of cod liver oil and similar foods is not generally understood by these mothers. The nurse makes sure that preschool children in the families are receiving the necessary protective foods to assure proper development. She also arranges with the local agencies in cases needing emergency medical or surgical care.

The Michigan Branch of the Academy of Pediatrics is acting in an advisory capacity in the carrying on of this project as it applies to infants and preschool children, members acting on a district basis as consultants to work with the county medical societies and the nurses.

Streptococcic Sore Throat in Bronson

Some months ago there occurred in Petersburg a rather extensive outbreak of streptococcic sore throat. This was referred to in the November, 1934, issue of the JOURNAL. Recently another milk-borne outbreak of streptococcic sore throat has occurred, this time in Bronson.

This outbreak had approximately twenty-five cases with one death. Several cows in the herd supplying the milk in question were found to have mastitis. An encapsulated organism corresponding in every way to the streptococcus epidemicus was isolated from the milk. This organism is of human origin. The organism was not recovered from the throats of patients, but there seems to be abundant evidence on which to base the conclusion that the outbreak was milk-borne and the cause the hemolytic streptococcus epidemicus. The milk was not pasteurized.

The causative organism in the Petersburg epidemic was a hemolytic streptococcus but not the encapsulated organism usually designated as the epidemicus.

Clinically the cases in the two outbreaks were different.

Cancer Survey

A survey to determine the prevalence of cancer in rural areas in Michigan is being undertaken by the Michigan Department of Health, under a grant from the United States Public Health Service. The counties to be included in the survey are those having full-time county or district health departments. Dr. Harold Kessler, who has been in practice in Alpena, joined the staff of the department January 28 to carry on the work.

A cancer survey has just been completed in the hospitals of Michigan by Dr. F. L. Rector, Field Representative of the American Society for the Control of Cancer. The program undertaken by the State Department of Health follows up this survey, extending it to include the practicing physicians. The plan of work decided upon after consultation with Dr. Rector and the Cancer Committee of the Michigan State Medical Society, involves visits to physicians to ascertain the number of cases of cancer known to them, age and sex distribution, the location of the lesion, type, etc.

Michigan had a total of 4,890 cancer deaths in 1933. On the generally accepted basis of three cases to each death, there are estimated to be approximately 15,000 cases in the State. The new survey will be the first step in determining the exact situation. The death rate from cancer in 1933 was 97.0, exceeded only by that from heart disease.

Quarantine Violation

Violation of a diphtheria quarantine drew jail sentences recently in Shiawassee County.

The local health officer reported persistent violation of the quarantine imposed on the family of a diphtheria carrier. Repeated warnings had failed to impress them with the seriousness of the health officer's instructions, and finally he appealed to the State Health Department.

Investigation resulted in the signing of a complaint by the health officer and a jail sentence of fifteen days for the son.

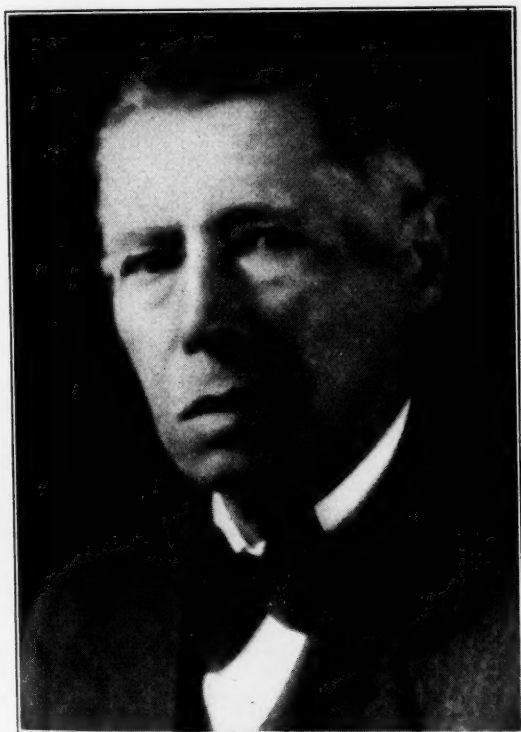
This apparently was not sufficient. A man friend of the daughter of the family, bringing her home from a nearby city, saw the quarantine sign on the house but went in, nevertheless, and spent several hours. Tracing the caller through his car license number furnished by the health officer was a simple matter, and both he and the daughter were arrested and fined \$25.00 each, plus costs of \$10.30. Failing to pay the fine, both were sent to jail for thirty days.

Talks at County Societies

The offer of the State Health Commissioner to send to any County Medical Society a physician from the Bureau of Communicable Diseases and Rural Hygiene to discuss the biologic products distributed by the Department has already resulted in fifteen such talks. Several more are scheduled and invitations are still coming in. The County Societies already visited are Macomb, St. Clair, Monroe, Lenawee, Washtenaw, Manistee, Newaygo, Livingston, Tri-County (Cadillac), Chippewa, Luce, Houghton, Dickinson-Iron, Delta and Menominee. In addition, a meeting was held in Lansing by the Sparrow Hospital Staff at which many Ingham County physicians were present.

OBITUARY**Dr. Edmund A. Christian**

Dr. Edmund A. Christian of Pontiac died on February the fifth at the age of seventy-eight years. Dr. Christian had become connected with the State Hospital in Pontiac in 1882 immediately after his graduation at the University of Michigan and had been



DR. EDMUND A. CHRISTIAN

connected with the institution up to the time of his death. He became superintendent of the hospital in 1894, retiring in 1932, when the event was observed by a complimentary dinner in Detroit on September 7, 1932. A report of this dinner will be found in the MICHIGAN STATE MEDICAL JOURNAL, Volume 31, page 675. Dr. Christian is survived by his widow and three daughters, Mrs. Robert White, and Mrs. John Clark, both of Pontiac, and Mrs. John Pendergast, whose home is in California. Among the professional organizations with which he was affiliated were the Oakland County Medical Society, Michigan State Medical Society and the American Medical Association.

Dr. W. R. Stringham

Dr. W. R. Stringham of Cheboygan died in the Lockwood Hospital, Petoskey, January thirty-first, at the age of seventy-six. He had worked at his practice up to within three or four days of his death. Dr. Stringham was born in St. Clair County in 1858. He was the youngest of a family of six. After a high school course at Romeo and a period of teaching public school, he entered the Detroit College of Medicine where he was graduated in 1884. Later he qualified and became a registered pharmacist. Dr. Stringham began practice in North Branch but soon afterward located in Cheboygan County. From there he went north to the copper country, where he engaged in practice with mining companies. He returned to Cheboygan in 1907, where he practised up to the time of his last illness. Dr. Stringham in 1886 married Miss Ida Pattison, who survives him. He is also survived by one son, Dr. James R. Stringham of Cheboygan, and one daughter, Miss Margaret, at home. He was a member of his County Medical Society, the Michigan State Medical Society and the Northern Michigan Medical Society.

COMMUNICATIONS**PRE-NATAL AND CHILD HEALTH AND NUTRITION**

To the Editor of the Journal of the Michigan State Medical Society:

I should be glad if you could find an appropriate place in the JOURNAL for the following communication.

THOMAS B. COOLEY.

Detroit, January 28, 1935.

Inasmuch as the State Department of Health and the pediatricians of the State have been impressed with the probability that children, especially in the ante-natal period and the first years of life, may suffer serious damage during the depression because of parental ignorance of their special needs; and as it has been possible through the Federal Relief Commission to arrange for an allocation of funds for a campaign to forestall such effects, the Child Health Division of the State Health Department, working with the Michigan branch of the American Academy of Pediatrics, has planned a special educational service in pre-natal and child health and nutrition, to be carried on for the next few months by public health nurses and nutritionists in a number of counties in the State. For various reasons it is not possible to cover the whole State, and the selection of counties has been on the basis of the probability of being able to do effective work, and of the need, as some of the counties already have efficient nursing service. In some districts this will mean a re-instatement of a service formerly enjoyed, but suspended for lack of funds.

The campaign is intended to be purely educational, and while it will not be limited strictly to the indigent, it should not only not interfere with any doctor's practice, but should be a definite stimulus to practice, as an important part of the nurses' service is to see that children are taken to their doctors for needed care.

It would have been desirable to present this plan to the various county societies before its inauguration, but this was not feasible because of the apparent need of starting work as soon as possible after the appropriation was granted. Efforts will be made, however, to keep the local profession in-

formed as to what is being done through regional conferences between nurses and nutrition workers and interested physicians and laymen. The plan contemplates no medical activity beyond that of local practitioners, except that the Health Department and the Academy of Pediatrics hope to arrange a scheme for pediatric consultation when the local physician desires it.

The general management of the project will be under the direction of the Child Health Division of the State Health Department. It is hoped that it will meet with the sympathetic interest and co-operation of practitioners in the counties involved.

The following is a list of the counties, as they have been grouped for facility in administering the work.

Keweenaw, Houghton, Gogebic, Iron, Dickinson, Alger, Delta, and Chippewa.

Leelanau, Benzie, Manistee, Oceana, Mason, and Muskegon.

Bay, Huron, Sanilac, St. Clair, Lapeer, and Macomb.

Montcalm, Gratiot, Ionia, Clinton, and Livingston.

Calhoun, Jackson, Berrien, Cass, St. Joseph, Branch, Lenawee, and Monroe.

LILLIAN R. SMITH, M.D.

Bureau of Child Hygiene
State Department of Health

BERNARD W. CAREY

Chairman for Michigan
American Academy of Pediatrics

GENERAL NEWS AND ANNOUNCEMENTS

A very important meeting of the House of Delegates of the American Medical Association was held on the fifteenth as announced. A digest of the proceedings will appear in the April number of this JOURNAL.

* * *

Bill H. ninety-two is introduced at the present session of the Michigan legislature to amend the Workingmen's Compensation Act to make compensable "all disabilities or death suffered by an employe as a result of occupational injury or disease."

* * *

The annual joint meeting of the Wayne County Medical Society with the Detroit Bar Association was held on February 25. Addresses were made by George E. Brand, LL.B., president of the Detroit Bar Association, and Dr. Louis J. Gariepy, chairman of the Committee on Policy of the Wayne County Medical Society.

* * *

The thirty-first annual Congress on Medical Education, Hospitals and Licensure met in Chicago on February 18 and 19. Among those present from Michigan were: Drs. J. D. Bruce and John Sundwall, Ann Arbor; B. A. Shepard, Kalamazoo; Burton R. Corbus, Grand Rapids; W. H. McCracken, Detroit; J. E. McIntyre, Lansing; Bruce Douglas and J. H. Dempster, Detroit.

Rarely does a Medical Society have the opportunity of honoring a centenarian among its own members and so it is of outstanding importance that the Muskegon County Medical Society on February 22 will entertain one of its own members, Dr. John Stoddard, who on this date reaches his hundredth year. Doctor Stoddard is the oldest alumnus of the University of Michigan and of Albion College and representatives from these two institutions will meet with the Society in doing honor to their guest.

* * *

Dr. Ferris N. Smith of Grand Rapids has just returned from London, England, where he read the opening paper at the meeting of the Royal Society of Medicine on February 1. He was invited to demonstrate the surgical procedure upon which his paper entitled "The Management of Chronic Sinus Disease" was based, and prior to the meeting operated at St. Bartholomews Hospital. A large number of the leading specialists in London witnessed one or more of these operations and participated in the discussion of the paper.

* * *

The Wayne County Medical Society, Detroit Tuberculosis Sanatorium and Detroit Department of Health are offering Post-Graduate Conferences in the auditorium of the Herman Kiefer Hospital, Detroit, as follows: *March 5*, 10 a. m., Scarlet Fever; 11 a. m., Tuberculosis (Diagnosis and Significance of Tuberculosis in Childhood.) *March 12*, 10 a. m., Diphtheria; 11 a. m., Tuberculosis (Diagnosis and Significance of Tuberculosis in the Adult). *March 19*, 10 a. m., Poliomyelitis; 11 a. m., Tuberculosis (Differential Diagnosis of Chest Diseases). *March 26*, 10 a. m., Pertussis; 11 a. m., Tuberculosis (Case Finding Methods and the Private Practitioner in the Field of Tuberculosis Prevention). These conferences will be presented by Dr. B. U. Estabrook and associates in Acute Communicable Disease and Dr. Bruce H. Douglas and associates in Tuberculosis.

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The *Annals of Medical History* published by Paul B. Hoeber, Inc., is a magazine devoted exclusively to medical history. It carries no advertising. Thus the expenses of publication must be defrayed entirely by subscriptions. Printed on paper of the best quality, the typographical appearance is equal to that of the best periodicals in the world. In an editorial in the January number the editor hints that unless there is a material increase in the number of subscribers, "The Annals is faced with the unpleasant possibility that it may have to suspend publication, at any rate until the dawn of better times." It would be indeed a misfortune if a magazine devoted to the higher and more esthetic and idealist phases of medicine should have to die for lack of support. The subscription is ten dollars a year. The magazine appears bi-monthly. We are making haste to forward our subscription in hope that the life of the *Annals of Medical History* may be indefinitely prolonged, which will surely be the case if our example is emulated by a sufficient number of the readers of the MICHIGAN STATE MEDICAL JOURNAL.

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Correction—The name of Leland S. Evans was inadvertently included in the list of doctors printed in the January number of this JOURNAL, page fifty.